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ABSTRACT

WITH INFORMATION DERIVED FROM IPI PLACEMENT TESTS, UNIT PRETESTS, CURRICULUM EMBEDDED TESTS (CET'S) AND UNIT POSTTESTS; STUDENT PERFORMANCE ON PRESCRIBED IPI TESTS AND SKILL SHEETS, AND OBSERVATION OF STUDENTS' BEHAVIOR, THE TEACHER SHOULD, AFTER PLANNING SESSIONS, BE ABLE TO INITIATE THE BUILDING OF A BASIS FOR INSTRUCTIONAL DECISION MAKING IN INDIVIDUALIZED INSTRUCTION AND TO APPLY IT TO DEVELOPING HIS OWN PRESCRIPTIONS. IT IS TO THIS END THAT THIS THIRD VOLUME OF A FIVE-VOLUME PROJECT IS DESIGNED. (GO)

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TEACHING IN IPI

volume III

FOR BETTER SCHOOLS, INC.

APPLETON-CENTURY-CROFTS

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TEACHING IN IPI

(A Program of Teacher Preparation)

by

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Volume 3

Research for Better Schools, Inc.

Regional Educational Laboratory

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TEACHING IN IPI

Section IV

Developing a Prescription

Part 1

A. Introduction

B. Guidelines for Instructional Decisions in Developing a Prescription

Suggested setting: Individual work
Group 3-6

Section IV will give you an opportunity to start building a basis for instructional decision-making in individualized instruction and to apply this to developing a number of your own prescriptions.

This section contains a brief introduction to the importance of the teacher's professional judgment in developing a prescription; a set of suggested guidelines for developing a prescription; and a set of simulated prescription-writing exercises. In the event there are students available you will be directed to start them working in the IPI Continuum.

As you work through this section, team up with other teachers by grade level(s), interests and/or needs to exchange information and discuss prescriptions. Since IPI teachers work together as an instructional team, these team experiences will be useful to you.

INTRODUCTION

To the casual observer, IPI may appear to be a mechanical way of planning and conducting instruction in the classroom. This could easily be the case _if_ children differed only in their rates of learning. In that case, the teacher would simply map out a standard program of instruction for the school year and move the students through at different speeds. Instructional decision-making would be at a minimum since materials, procedures, teaching methods, etc. would be arbitrarily predetermined for the entire class.

But this is not IPI. IPI is a system of individualized instruction that recognized that children differ in a variety of observable ways. If offers the teacher _a framework_ within which to individualize instruction as well as _some prepared materials_ to help in the task. However, since neither is sufficient to individualize instruction, the IPI teacher is encouraged to add the essential ingredient of instructional decisions. In IPI, instructional decisions are choices a teacher makes in putting together a unique program of studies for a student.

The IPI teacher starts making instructional decisions as soon as the student is placed in the Continuum and choices are made in answering these questions:

1. Which unit skills should this student be working on?
2. Which skill sheets should be prescribed?
3. Which Instructional Techniques should be prescribed?
4. How long should this student spend on a unit skill(s)?
5. What else can I devise to help this student in mastering the prescribed skills?

6. What other skills do I want this student to learn?

The series of answers to these questions asked about a particular student will result in a unique combination of learning experiences called the student's learning prescription.

The answers to these questions cannot be based upon IPI test data and skill sheet scores alone. Teacher observation of what the student is doing and how he is doing it is important. Generally speaking, IPI teachers make their instructional decisions based upon information gathered from:

1. Test information from IPI Placement Tests, Unit Pretests, CETs and Unit Posttests.
2. Student performance on prescribed IPI tests and skill sheets.
3. Observation of student's behavior as he works out solutions to problems, handles materials, manipulative devices and equipment, and as he responds to discussions and answers questions in IPI situations and non-IPI situations.
4. Planning sessions with other professional personnel sharing instructional responsibility for the student.

In addition, the IPI teacher collects information about the student from the more usual sources such as cumulative records and parent-teacher conferences.

There is no pat formula that can be used in building a prescription from these data. The teacher makes a professional judgment about the meaning of these data and starts choosing learning experiences for the student based on the judgment made. IPI teachers deviate from recommended IPI guidelines when there is some very concrete evidence to indicate the need to do so.

Once choices are made, the teacher records them on the Prescription Sheet. The Prescription Sheet is an important two-way communication link between the student and the teacher. The teacher communicates to the student the choices made by listing the: unit and unit skill(s) that have been assigned to the student; specific tests to be taken; particular skill sheets to be completed; and the Instructional Techniques to be used to bring about mastery of the skill(s). Information about student progress is communicated to the teacher through the Prescription Sheet in the form of skill sheet scores, test results and number of days worked.

The teacher supplements this communication link as needed in as many ways as can be devised. Frequently, the teacher attaches a brief note to the student's work folder or confers with the student to exchange additional information.

GUIDELINES FOR INSTRUCTIONAL DECISIONS

IN DEVELOPING A PRESCRIPTION

1. Test information from IPI Placement Tests, Unit Pretests, CET's and Unit Posttests.
2. Student performance on prescribed IPI tests and skill sheets.
3. Observation of students behavior.
4. Planning sessions.

1. Test information from IPI Placement Tests, Unit Pretests, CET's and Unit Posttests.

1. Test Information from IPI Placement Tests,

Unit Pretests, CETs, Unit Posttests

(Review previous sections on IPI tests.)

Placement test information will be discussed first. This will be followed by a discussion which covers jointly the use of pretest, CET and posttest information. These three tests are combined in discussion since they are similar in sampling and construction, and they test each unit skill separately.

IPI PLACEMENT TESTS, in addition to locating the student in the Continuum and providing an entry into the Continuum, offer the teacher additional information upon a little probing. The magnitude of scores on each level of a particular area can reveal a history of weakness in the area or an uneven profile of mastery. A teacher usually goes back into Placement Test scores as part of diagnosing a student's persistent learning problem and looks for "pockets" of weakness. This helps the teacher pinpoint a possible source of the difficulty.

Example: A teacher decides to check into the background of a student's inability to retain mastery of D-Numeration. The Placement Profile shows that the student had scored 18% in C-Num. He was subsequently tested in B-Num. and scored 82% in it. Technically, 80% is Placement Test mastery and he was placed back in C-Num. This sequence of low and borderline scores alerts the teacher to the possibility that the student's poor retention might be due to "borderline" mastery in B-Num. and extreme weakness in C-Num. With the potential source of difficulty (C-Num.) pinpointed, the teacher goes directly to C-Num. data to start a closer analysis of the problem.

UNIT PRETESTS, CETs AND UNIT POSTTESTS are similar tests in that they all measure a student's level of mastery of unit skills. Though each type is used at different times (before, during and after work), the tests provide point and percent scores for the unit skill(s) tested, pretest averages, posttest averages, and actual samples of the student's work.

Point and percent scores for a unit skill and unit percent averages help the teacher pick out the skills that are already mastered, the skills that are cases of borderline mastery, and the skills that definitely require a prescription. A skill score of:

100%-85% usually indicates acceptable mastery of a skill and no prescription is required. Occasionally, a teacher judges that a pretest score of 85% or a diagnostically-used CET score of 85% is not valid and decides to examine the actual skill test items to evaluate the student's work before making a decision about mastery. Usually an 85+% score on a posttest or a CET (prescribed after successful work) is accepted as mastery without any need for further checking.

85%-80% is a borderline score which indicates near mastery of a skill. This range of scores in a pretest directs the teacher to examine the right and wrong responses in the skill test before making a decision to prescribe work. On a posttest or CET, 80-85% in a skill directs the teacher to the test items and back to the work completed in the skill before an extended prescription is written.

79%- 0% indicates a definite need for a prescription in the skill and directs the teacher to examine the right and wrong responses in the skill test for a closer diagnosis. In addition, when the 79-0% is a posttest or CET score the teacher usually examines the work done previously in the skill.

The size of the score (79%-0%) indicates the size of the gap between the student's current level of achievement and the desired level of mastery.

Extremely low scores (0%-40%) may mean that the student is quite weak in that particular unit or in the math area in general. The teacher should determine which is the case before starting any prescription. 0%-40% scores may also mean that the student has made some mechanical error(s) in test-taking. This should be determined before accepting the score as lack of mastery.

Scores ranging from 40%-60% and 60%-80% indicate increasing degrees of mastery. With this in mind, the teacher can project that skills with relatively higher scores will require shorter and less intensive prescriptions, and can plan accordingly.

Point and percent scores for a skill help the teacher quickly sort out skills into categories of mastery, borderline master and no mastery. Teacher judgment and familiarity with the content of IPI tests play an important part in this sorting out process. Since the process singles out the skills requiring further attention, it is a vital one.

Pretest and Posttest Averages provide an immediate picture of overall strength in the unit. They are the averages of the skill scores in the unit. A unit percent average by itself is not much help to a teacher. A unit average is useful when related to the unit skill scores to determine if there is a general weakness in the unit or an isolated weakness in a specific skill. For example, a unit average of 73% can be obtained from both of these sets of skill scores--90, 90, 20, 90 and 75, 70, 68, 77. In the first set, the 73% is due to a weakness in one skill. In the second set, the 73% indicates a weakness in each skill in the unit.

2. Student performance on prescribed IPI tests and skill sheets.

2. Student Performance on Prescribed IPI Tests and Skill Sheets

Detailed evidence of how the student behaves or performs the required skill is found in his completed tests and skill sheets. For examples, problems, or work items contained in IPI tests and skill sheets ask the student to perform the skill as stated in the skill objective.

The evidence the teacher gathers from examining the completed tests and skill sheets provides one basis for instructional decisions in developing a prescription. The teacher diagnosis the student's work to determine:

1. A pattern of errors, that is, the kinds of work items the student can do and cannot do.
2. The frequency of errors, that is, how many times the student repeats the same type of error.

Pattern of errors: The student's correct and incorrect responses on work items help the teacher break down the skill objective into smaller behaviors. The incorrect responses are diagnosed as small behaviors needing a prescription.

Example 1: B-Num.-2 requires the student to read and count orally numerals 0-100. The student's work on skill sheets shows he can read and count numerals 0-20 but he cannot go from one decade to another for numerals 21-100. He has trouble in particular going from 29-30, 39-40, 49-50, ... 99-100. Based on this diagnosis, the teacher extends the prescription by prescribing STS B-Num.-2 skill sheets containing counting exercises in the upper decades and assigns a number-line activity or chart to help in bridging the decades.

Example 2: D-Mult.-4 requires the student to write or state products of multiplication facts in which 2, 3, 4, and 5 are factors. A student scores 81% on Part 1 of CET I for this skill. Inspection of this portion of the test indicates that six of the errors made occurred in the examples involving 3 and 5 as factors. A quick check into the last part of the prescription just completed by the student shows that this type of error occurred on his skill sheets also. Since the student's performance in D-Mult.-1, 2, 3 and in the area of Addition has been consistently good, the teacher decides the student needs only additional drill in the 3 and 5 tables. The student is directed to use a set of multiplication flashcards (factors 3 and 5) and is assigned to a peer tutor for drill. In addition, one new D-Mult.-4 STS skill sheet is prescribed to follow this drill exercise. The teacher suspends further judgment until this latest prescription is completed.

Frequency of errors: The frequency of errors that a student makes on a skill sheet or skill test is an indication of the relative strength or weakness in that skill. While determining the pattern of errors, the teacher also notes how many times the student repeats the same type of error. The more frequently the error-type is made, the more the teacher must focus the student's prescription on changing that specific behavior.

When diagnosing the frequency of errors in individual skill tests (pre and post) and CET's, the teacher examines the number and types of errors made on a sample of work items for the particular skill. The prescription following this should focus on the types of errors made and should give greater emphasis to the error-types most frequently occurring.

When diagnosing the frequency of errors on skill sheets, the teacher examines the number and types of errors made on the actual work items for the particular skill. Therefore, not only are the skill sheets examined separately but the complete set of skill sheets prescribed simultaneously is also reviewed in toto. Since there is no established mastery criterion for skill sheets, teachers must rely heavily upon their judgment of the student's work on the skill sheets. The teacher's judgment is formed by comparing the student's work on the set of skill sheets with the behavioral statement of the required skill objective. In addition, the teacher previews the mastery test (pre, post or CET) to be taken and asks the question, "Is there a good chance that this student will score over 85% on this test?" Occasionally, when the teacher is unable to make this prediction of success with confidence, a skill sheet that closely resembles the mastery test is prescribed. The student's performance on this test like skill sheet helps the teacher decide whether or not to prescribe the test itself.

Example: B-Num.-8 requires that the student selects which of two (or three numbers) is greater (greatest), smaller (smallest) for numbers to 100; places > or < between two numbers to indicate the greater or lesser. The B-Num. Pretest - Skill 8 score for one student is 60% (6 out of 10 points). Examination of the B-Num.-8 skill test indicates that the student missed 1 out of 5 answers selecting the smallest number from a set of 3, and missed 3 out of 5 answers using the > or < symbols. The teacher quickly reviews the first error-type with the student and receives the correct answer orally. The prescription for B-Num.-8 is then started by prescribing one skill sheet covering the use of the > and < symbols. The student will show it to the teacher after he completes it and the aide has corrected it.

3. Observation of student's behavior.

3. Observation of Student's Behavior

The prescriptions an IPI teacher develops are deliberately designed to help the student change his behavior. Sometimes the change is the acquisition of a new IPI math skill, the strengthening of [illegible] existing behavior or the extinction of an undesirable one. Since the teacher's focus is on behavioral change, the student's existing behaviors are the data used to make instructional decisions. It is important to observe and interpret the student's performance on IPI tests and skill sheets in order to analyze and prescribe for the specific IPI skill to be mastered. However, the teacher must also take into account and use relevant data about other student behaviors in creating a total learning environment for the student.

Included in these relevant data are:

1. All those behaviors that will help the student learn the desired IPI math skill.
2. All those behaviors that will hamper the student's learning the desired IPI math skill.
3. All behaviors other than the specified IPI math skills that the teacher (or school district) sees as desirable educational goals in a math program.

The following discussion of each of these areas is intended to provide a framework for observing student behavior in IPI. It is not within the scope of these materials to explore fully the complex area of child study. Success in observing and interpreting student behavior will depend greatly upon the expertise the teacher brings to the current situation, the group discussions used in working through these materials, and continued inservice work in child study as IPI is implemented in the classroom.

Behaviors that will help the student learn the desired IPI math skill: The student's interests, attitudes, and preferences are important factors in motivating students and sustaining their attention in any school program. Each time a prescription is written, it should attempt to capitalize upon some behavior that will make it easier or more pleasant for the student to learn the prescribed skill. For example: A desire for peer recognition is used to motivate a student to master a skill in order to tutor another student needing help; a student whose attention span is increased by competition is assigned to small group instruction under teacher supervision; a student who enjoys constructing things is encouraged to make a set of manipulative devices demonstrating his mastery of some math skill or part of a skill. These are familiar examples of techniques used by teachers sensitive to the way children learn best.

Occasionally, when the positive behaviors that help children learn readily are weak or do not exist, IPI teachers de-emphasize prescribing for mastery of the IPI skill temporarily and emphasize prescribing activities to develop or strengthen the positive behaviors. This is a temporary strategy that is well worth the time invested.

This is particularly true in relation to certain behaviors that enable the student to work smoothly in IPI. More specifically, these behaviors are:

1. Following oral and written directions.
2. Obtaining prescribed materials independently.

3. Following a prescription independently.
4. Attempting to solve problems independently before requesting help.
5. Requesting help when unable to solve problem independently.
6. Following IPI procedures for using the aide's services.
7. Working with a variety of adults.
8. Maintaining the order of the student folder.
9. Operating and using disc players, manipulative materials, filmstrip projectors and other equipment called for by the prescription.
10. Selecting and engaging in some constructive activity while waiting for teacher help.
11. Using performance in a prescription for self-diagnosis.
12. Accepting mastery as a criterion.
13. Self-prescribing.

In developing a prescription, it is important to encourage and reward the student in acquiring these behaviors along with mastering the IPI skill.

Behaviors that will hamper the student's learning the desired IPI math skill: Frequently, as a student works on mastering an IPI skill, the teacher will observe the existence of certain other behaviors that impede or hamper the student's progress. They may be certain social behaviors, physical characteristics or improper study skills that make it difficult for the child to achieve mastery. Depending upon the behavior and the teacher's judgment of the situation, the teacher will compensate for the behavior or give the student limited opportunity to exhibit it. Still, with other behaviors, the teacher will work towards extinguishing them while substituting more appropriate ones.

For example: A highly energetic, physically restless child receives a prescription that includes some large motor activity and a minimum of extended pencil and paper exercises; a student who is easily frustrated in learning a new skill is introduced to the skill by the teacher; a student, highly dependent upon teacher help, is initially refused help and directed by his teacher to think of two possible solutions to his latest request for help. The teacher praises his efforts and guides him to the solution of the problem.

Behaviors other than IPI math skills that are desirable educational goals: Frequently, the teacher has a number of over-arching broad educational goals of elementary education, that appear in every curricular area taught. Such broad goals as development of group processes, social applications of math, development of special talents, etc. are persistent themes in many elementary school programs. In addition, IPI, to function successfully as a system, depends upon broad educational goals of self-initiation, self-direction, problem-solving processes, self-evaluation, and self-motivation. In developing prescriptions, an IPI teacher makes every effort to select instructional resources that will contribute toward these goals as well as toward the mastery of the IPI skills.

4. Planning sessions

4. Planning Sessions

During planning sessions, IPI teachers, sharing the instructional responsibility for a particular group of students, meet to share information and plan for their students on a regularly scheduled basis. This provides the teacher with:

1. Additional information about the student's behavior as observed by other professionals in different settings.
2. An exchange of ideas and suggestions (old & new) for developing improved prescriptions.
3. Help in analyzing instructional problems and in designing appropriate solutions.

During this time, the teacher gathers more data about the student and increases her repertoire of professional competency. Both of these outcomes can be used to improve the quality of instructional - decision-making in IPI.

(Planning sessions are discussed in greater detail in Section V.)

DIRECTIONS FOR GUIDING STUDENTS THROUGH THE CONTINUUM

If there are students available to you, you will be able to guide them through the Math Continuum. It is suggested that you also complete the simulated case studies as directed.

In order to take students through the Continuum you will need a full set of IPI materials (student and teacher editions). You may act as teacher and aide or rotate these roles with the other teachers working through these materials.

Use the Guidelines contained in Teaching in IPI to place the students in the Continuum and to develop prescriptions for them.

If time permits, continue working through the Continuum yourself.

The simulated case studies that follow are designed to help you gain experience in developing prescriptions.

Form groups of 3-6 teachers with whom you will confer at intervals as you work through the simulated exercise. The teachers should be working on the same case study.

There are four types of case studies presented:

1. Type 1 is a complete simulation in which all data and instructional decisions are supplied. It is designed to familiarize you with the detailed flow of developing a prescription.

2. Type 2 is a partial simulation in which all data are supplied and you are asked to record the instructional decisions. It is designed to give you practice in using IPI procedures and forms.

3. Type 3 is a simulation in which some data are supplied and you are asked to make the instructional decisions. You are given model sample instructional decisions against which you will evaluate your own decisions. Small group discussion is extremely imporant in evaluating your work in this simulation. By pooling your experience and professional knowledge with the other teachers in your group, you will have an opportunity to develop a variety of alternate decisions for the simulated prescription.

4. Type 4 is a simulation in which basic data are supplied and model decisions are not given. This simulation is the briefest and most closely resemble the more rapid flow of instructional decision-making followed by an IPI teacher. Small group discussion at frequent intervals is essential in working through this simulation.

The simulated case studies you will work on are indicated in the table below. You are asked to complete a minimum of four.

Type	Case Study	To be completed by
1	Joe Bowen : C-Frac.	All teachers
2	Susan Markham : D-Mult.	All teachers
3	Sandy Owens : B-Num.	1st & 2nd grade teachers
3	Ralph Stoney : F-Div.	3rd, 4th, 5th & 6th grade teachers
4	John Tanes : C-COP	1st, 2nd, 3rd & 4th grade teachers
4	Eileen O'Brien: E-Num.	5th & 6th grade teachers

TEACHING IN IPI

Section IV

Developing a Prescription

Part 2

A. Simulated Case Studies

1. Joe Bowen : C-Frac.
2. Susan Markham : D-Mult.
3. Sandy Owens : B-Num.
4. Ralph Stoney : F-Div.
5. John Tanes : C-COP
6. Eileen O'Brien: E-Num.

Simulated Case Studies

by

Mary V. Brown, Research Assistant

assisted by

Jo Ann Weinberger, Research Assistant

Suggested setting: 1. Individual
2. Groups 3-6

Section IV

DEVELOPING A PRESCRIPTION

CASE STUDY - TYPE 1

JOE BOWEN

C-FRAC.

This is Joe's Placement Profile. He has worked through units:
B-Numeration, B-Place Value, B-Fractions, C-Numeration, C-Place Value, C-Addition and C-Subtraction.

Examine the Profile and note the order of unit assignment.

Joe's next unit of work will be C-FRACTIONS.

ARITHMETIC PLACEMENT SCORE PROFILE

ipi
individually prescribed instruction
MATHEMATICS

SCHOOL STAMP
P. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER	0	9	7	6
	P-4	5	6	7

GRADE 3
P. 9

ROOM 107

KEYPUNCH SAMPLE			TO P. 78
P. 14-15	P. 16	P. 17-18	
MATH. AREA CODE	PLACED AT LEVEL	% OF PLACEMENT	
01	B	85	

MATHEMATICS AREA	DATE OF TEST	MATH AREA CODE		PLACEMENT LEVELS B—I								PLACED AT LEVEL	ORDER
	P. 10-13			B	[✓ C]	D	E	F	G	H	I		
NUMERATION	9/30	01	MAX. PTS.	10	10							B	1,4
			SCORE	6	2								
			%		20								
PLACE VALUE		02	MAX. PTS.	10	10							B	2,5
			SCORE	6	1								
			%	60	10								
ADDITION		03	MAX. PTS.		10							C	6
			SCORE		7								
			%		70								
SUBTRACTION		04	MAX. PTS.		10							C	7
			SCORE		6								
			%		60								
MULTIPLICATION		05	MAX. PTS.									D	
			SCORE										
			%										
DIVISION		06	MAX. PTS.									D	
			SCORE										
			%										
COMBINATION OF PROCESSES		07	MAX. PTS.		10	10						D	
			SCORE		8	3							
			%		80	30							
FRACTIONS		08	MAX. PTS.	10	10							B	3,8
			SCORE	5	1								
			%	50	10								
MONEY		09	MAX. PTS.		10							C	
			SCORE		6								
			%		60								
TIME		10	MAX. PTS.		10							C	
			SCORE		4								
			%		40								
SYSTEMS OF MEASUREMENT		11	MAX. PTS.		10	10						D	
			SCORE		9	3							
			%		90	30							
GEOMETRY		12	MAX. PTS.		10							C	
			SCORE		5								
			%		50								
ADDITION AND SUBTRACTION		34	MAX. PTS.	10								C	
			SCORE	10									
			%	100									

Since Joe's next unit of work is C-FRACTIONS, examine his work on the Placement Test in C-Fractions. It is on page 29.

The procedures for writing Joe's prescriptions in this unit are outlined for you in this case study. Follow them carefully. There will be several points at which you can review these procedures before Joe completes this unit.

IPI Placement Test **C Fractions (08)**

NAME AND NUMBER Joe Bowen 0976

unit page 1 of 1

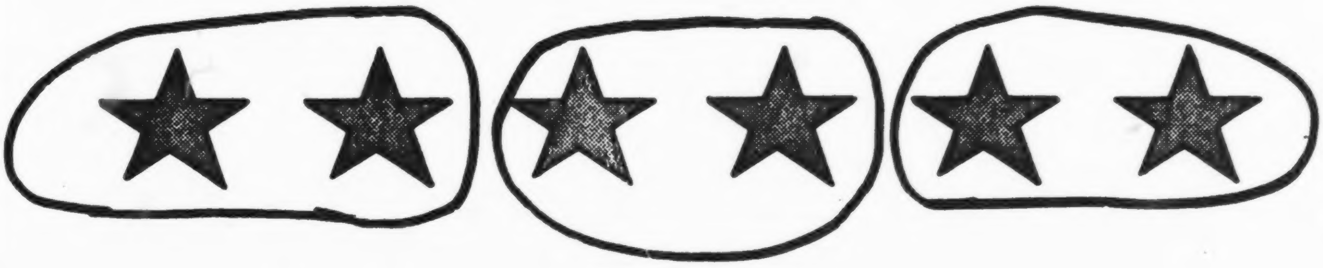
DATE

CLASS 3

CIRCLE CORRECT BOX

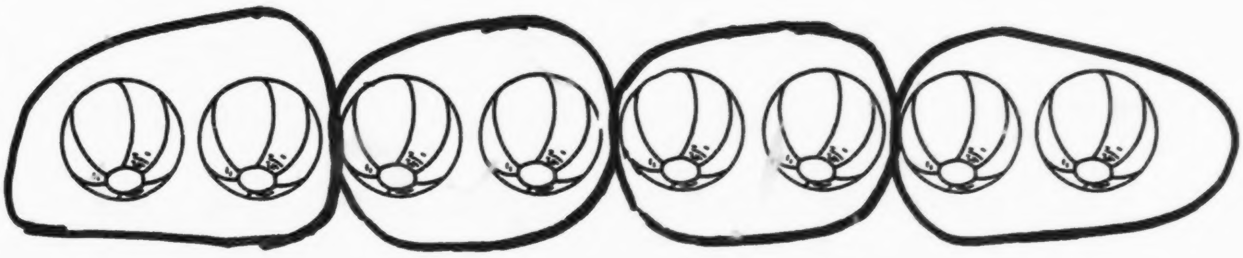
TL. PTS.	
4	100%
NO. OF PTS	%
3	75
[✓ 2]	[✓ 50]
	25

Skill 3 – Directions: Look at the row of stars. Divide the row into thirds by drawing a circle around all the stars in each third.



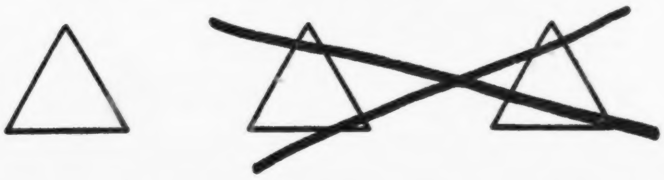
three sets of 2 each

Look at the row of balls. Divide the row into fourths by drawing a circle around all the balls in each fourth.



four sets of 2 each

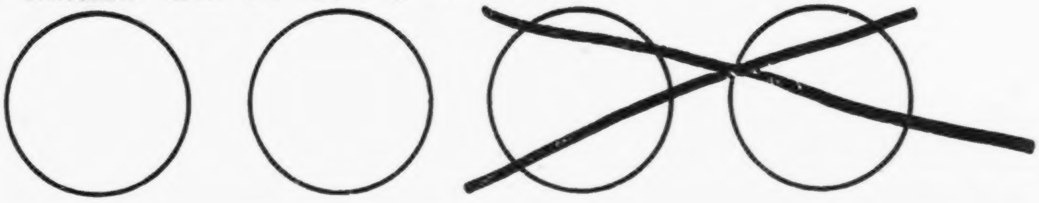
Skill 4 – Directions: Look at the row of triangles. Make an X on $\frac{1}{3}$ of them.



any one △

Look at the row of circles.

Make an X on $\frac{1}{4}$ of them.



any one ○

You assign the C-Fractions Pretest by writing C-Frac. in the unit space at the top of the Prescription Sheet and by writing Pretest on line 1.

See sample on opposite page ⟶

Joe will get his Pretest and complete it. He will give the completed Pretest to the Aide for scoring.

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF

[illegible]OOL STAMP U. S. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER 0 9 7 6
U. S. 4 5 6 7

GRADE 3
U. S. 9

ROOM 107

UNIT C-Frac.
U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	2/1	MB	Pretest											
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
.16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW

PUNCH SAMPLE

PRE % U. 32-33	POST. % U. 34-35	TO 78
80	95	

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

This is a copy of Joe's Pretest that has been scored by the Aide.

Turn to pages 39,40 and 41 for directions to the Aide.

Page 39 will direct the Aide to record information on the Prescription Sheet.

Page 40 will tell the Aide where to record information on the Unit Test Record.

SCHOOL CODE ☐

NAME Joe Bowen

NUMBER 0976 CLASS 3

ipi

individually prescribed instruction

MATHEMATICS

Pre-Test

LEVEL C

FRACTIONS (08)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

Appleton-Century-Crofts ACC Division of Meredith Publishing Company

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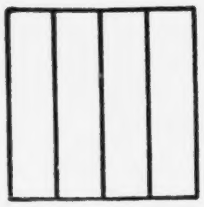
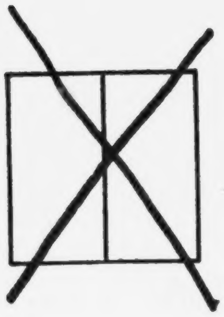
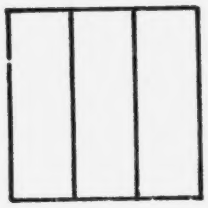
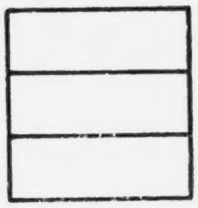
DEVELOPMENTAL EDITION

CIRCLE CORRECT BOX	TL. PTS.	
	5	100%
	NO. OF PTS.	%
	[✓ 4]	[✓ 80]
	3	60
	2	40
	1	20

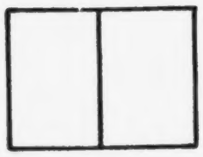
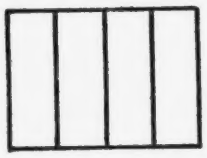
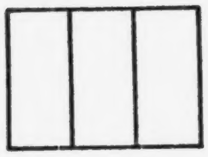
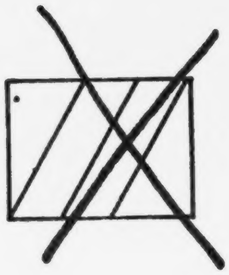
Directions: Put an X on the figure that is divided into . . .

halves

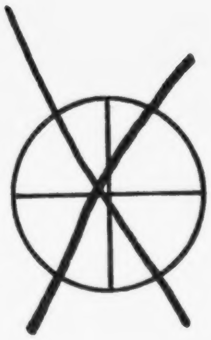
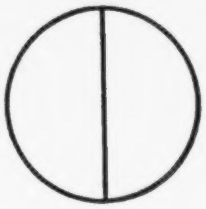
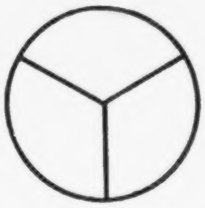
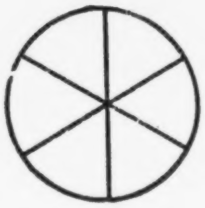





X

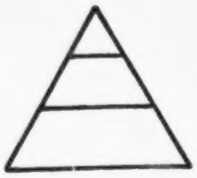
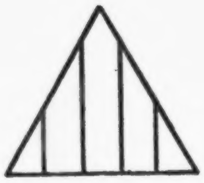
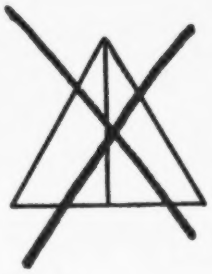
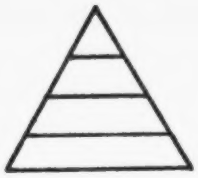
thirds

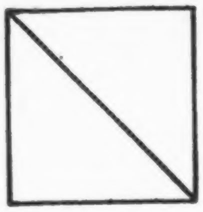
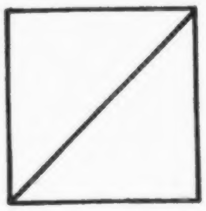
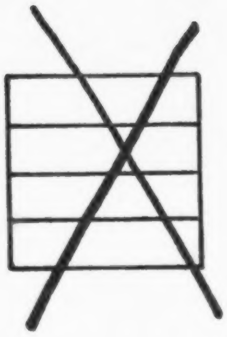
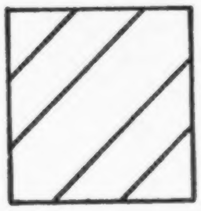
fourths

halves

fourths

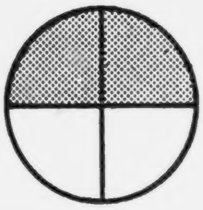
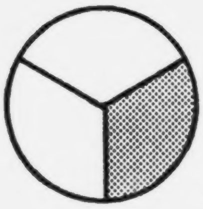
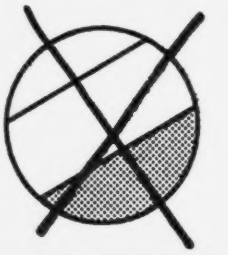
C FRACTIONS (08) PRE-TEST SKILL 2

CIRCLE CORRECT BOX

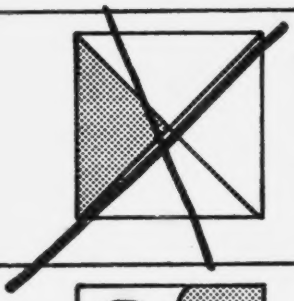
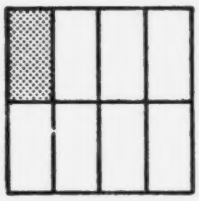
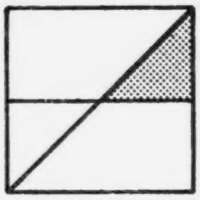
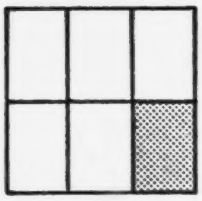
TL. PTS.	
7	100%
NO. OF PTS.	%
6	86
5	71
[✓ 4]	[✓ 57]
3	43
2	29
1	14

Directions: Put an X on the figure which is shaded to match the printed fraction.

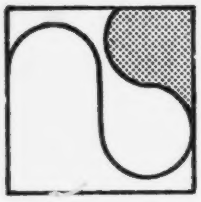
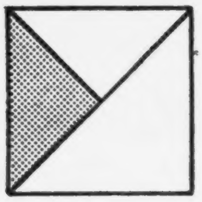
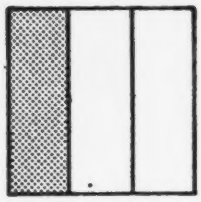
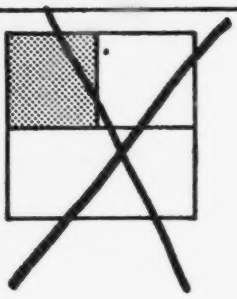
$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{3}$

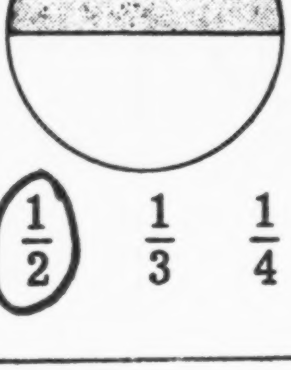





Directions: Fill in the blank.

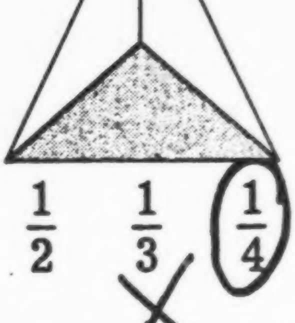
One-third means 1 of 3 equal parts.

Directions: Draw a circle around the fraction that tells what part of the figure is shaded.

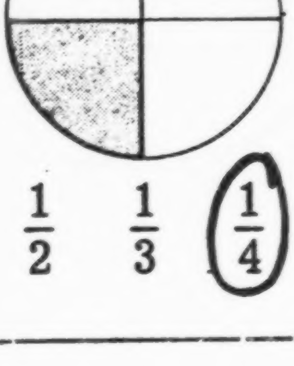
39



[✓ $\frac{1}{2}$] $\frac{1}{3}$ $\frac{1}{4}$



$\frac{1}{2}$ $\frac{1}{3}$ [✓ $\frac{1}{4}$]



$\frac{1}{2}$ $\frac{1}{3}$ [✓ $\frac{1}{4}$]

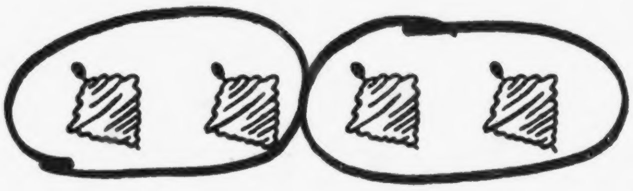
C FRACTIONS (08) PRE-TEST SKILL 3

CIRCLE CORRECT BOX

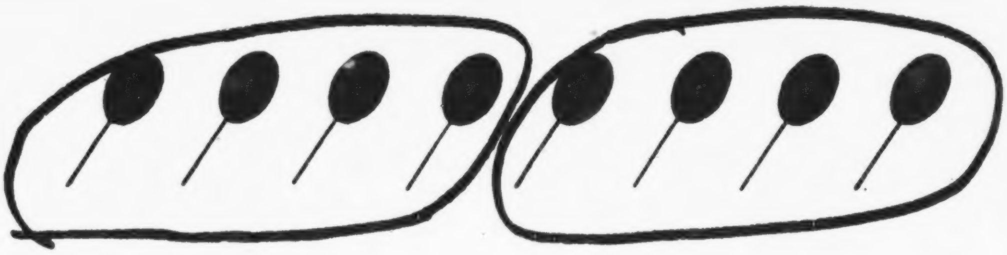
TL. PTS.	
5	100%
NO. OF PTS.	%
4	80
3	60
[✓ 2]	[✓ 40]
1	20

Directions: Circle the parts of each row that will divide the row into . . .

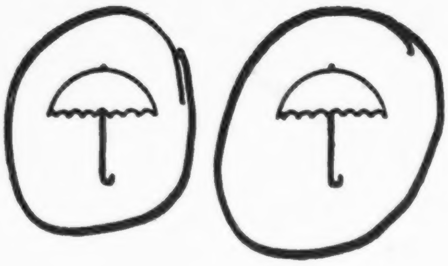
halves



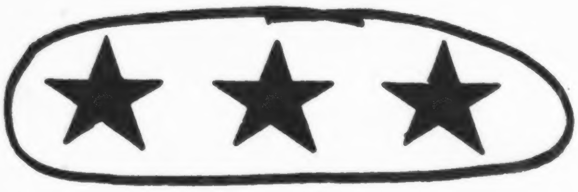
X fourths



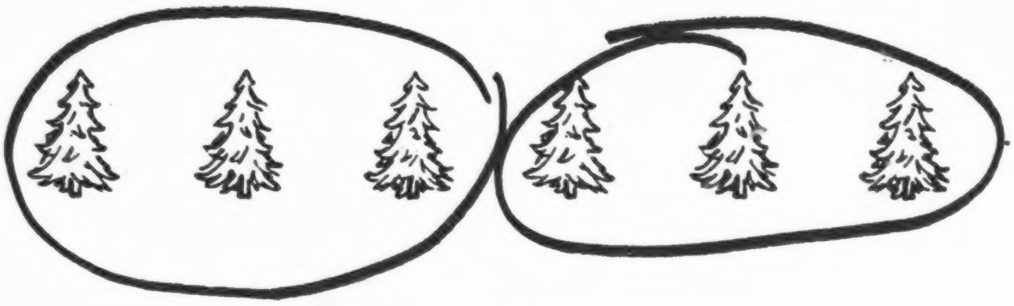
halves



X thirds



X thirds

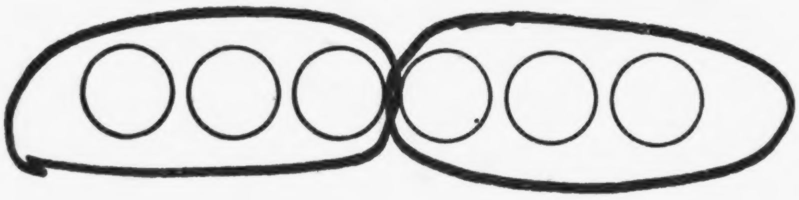


C . FRACTIONS (08) PRE-TEST

SKILL 4

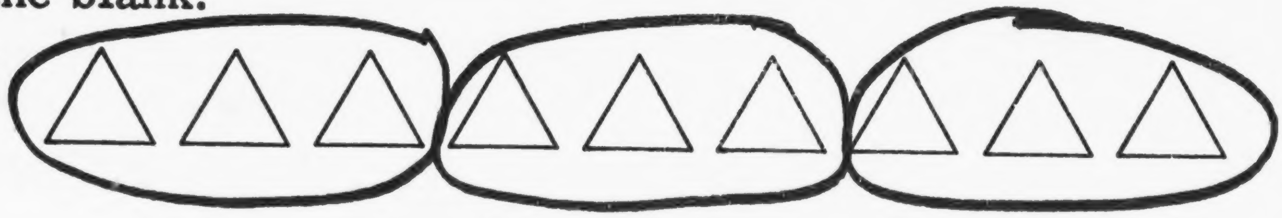
CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 5]	[✓ 100%]
	NO. OF PTS.	%
	4	80
	3	60
	2	40
	1	20

Directions: Divide the set of circles below into two equal parts. Circle each of the parts. Fill in the blank.



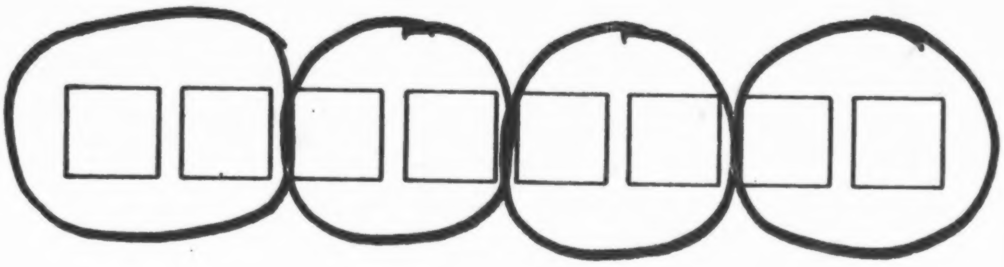
Each part is 1/2 of the total set.

Directions: Divide the set of triangles below into three equal parts. Circle each of the parts. Fill in the blank.



Each part is 1/3 of the total set.

Directions: Divide the set of squares below into four equal parts. Circle each of the parts.

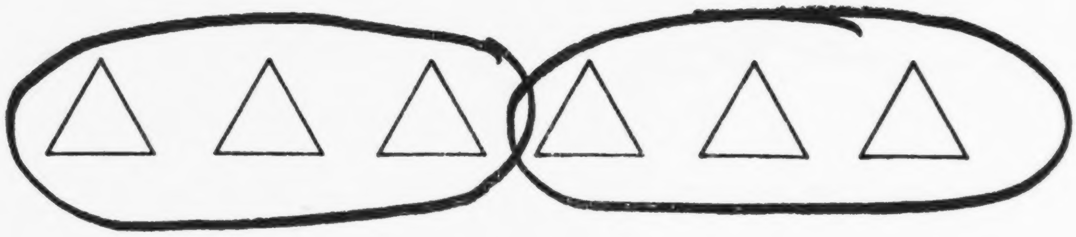


CIRCLE CORRECT BOX

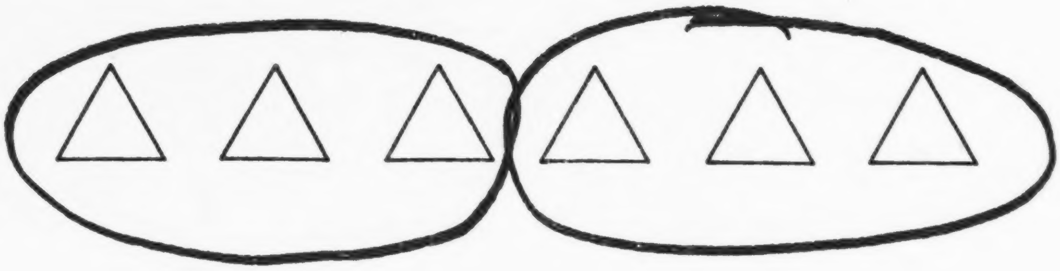
TL. PTS.	
5	100%
NO. OF PTS.	%
4	80
3	60
2	40
1	20
0	0

Directions: Circle one part of each set which is equal to the fraction shown.

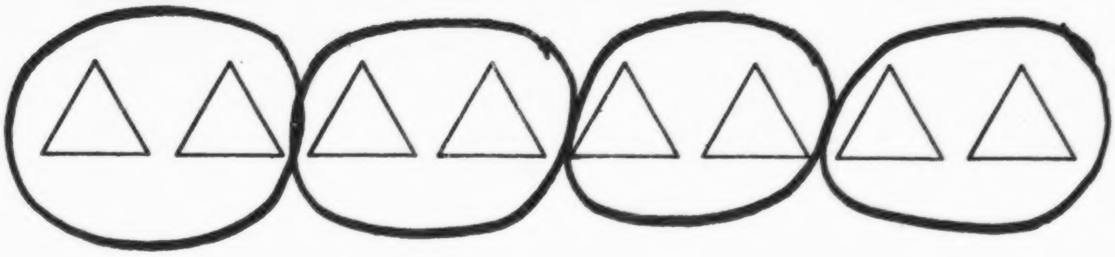
X $\frac{1}{2}$



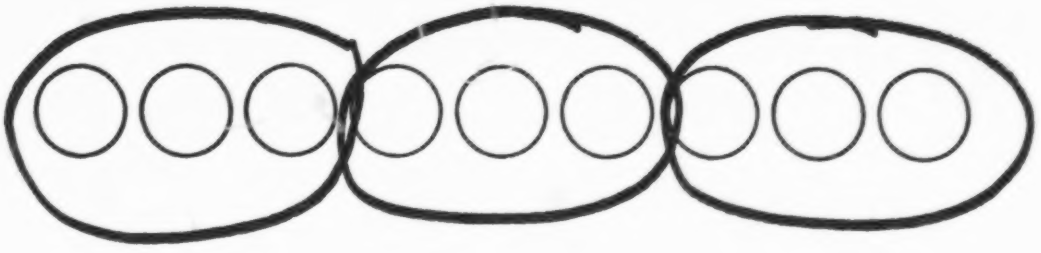
X $\frac{1}{3}$



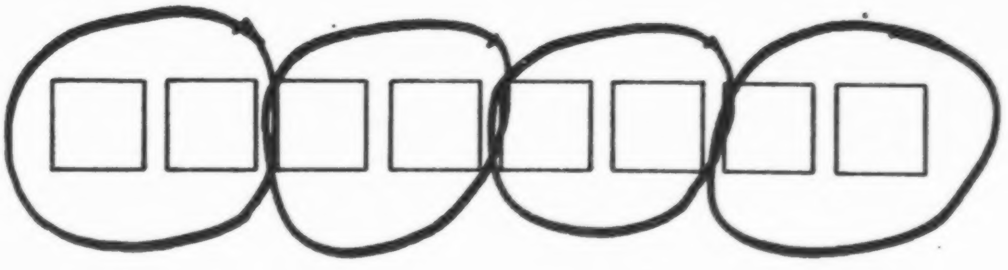
X $\frac{1}{4}$

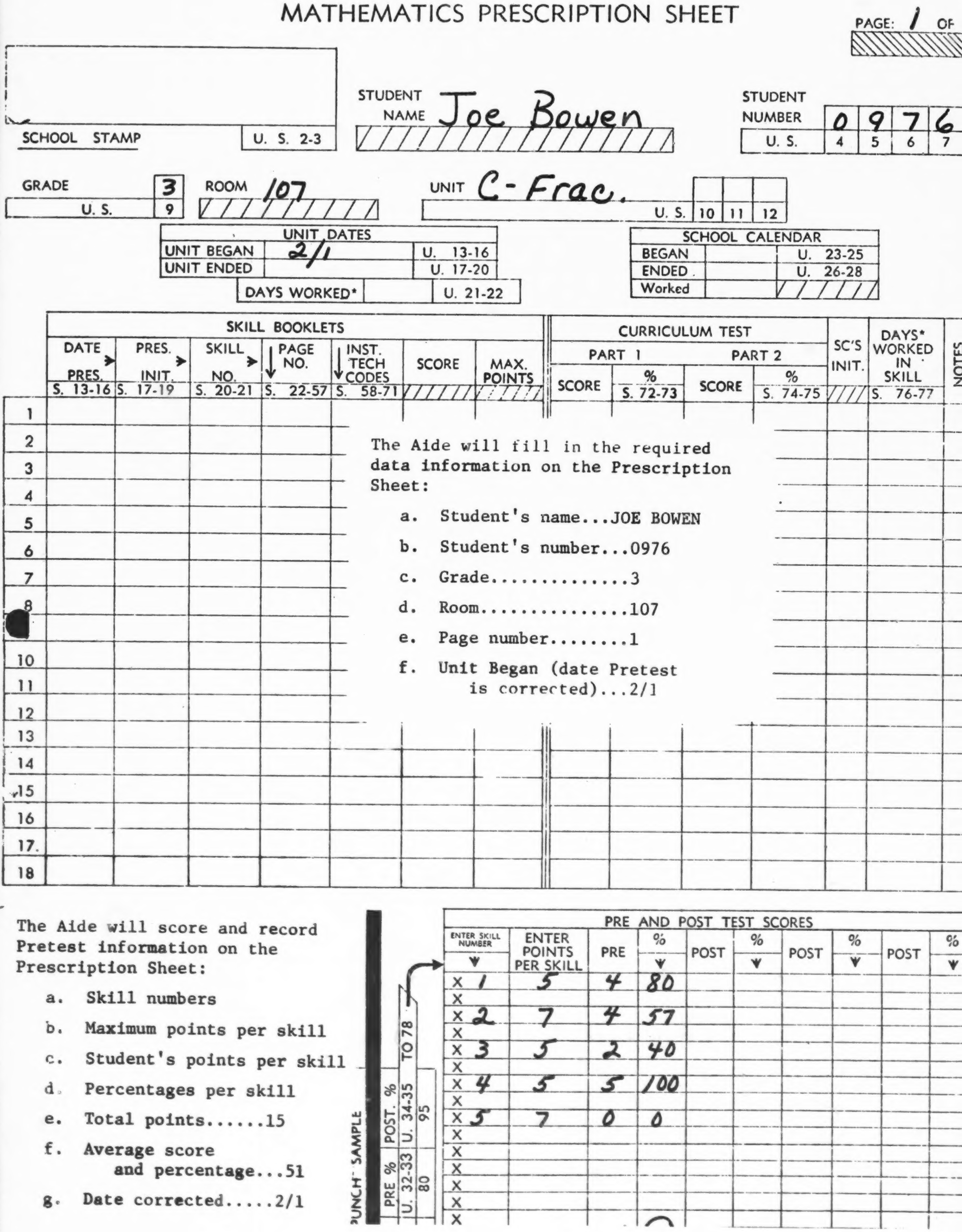


X $\frac{1}{3}$



X $\frac{1}{4}$





MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF

SCHOOL STAMP	U. S. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER	0	9	7	6
U. S.	4	5	6	7

GRADE	3
U. S.	9

ROOM 107

UNIT C-Frac.			
U. S.	10	11	12

UNIT DATES		
UNIT BEGAN	2/1	U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. →	PRES. INIT. →	SKILL NO. →	↓ PAGE NO.	↓ INST. TECH CODES	SCORE	MAX. POINTS	SCORE	%	SCORE	%	SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71				S. 72-73		S. 74-75		S. 76-77	
1														
2														
3														
4														
5														
6														
7														
8														
10														
11														
12														
13														
14														
15														
16														
17.														
18														

The Aide will fill in the required data information on the Prescription Sheet:

a. Student's name...JOE BOWEN

b. Student's number...0976

c. Grade..............3

d. Room...............107

e. Page number........1

f. Unit Began (date Pretest is corrected)...2/1

The Aide will score and record Pretest information on the Prescription Sheet:

a. Skill numbers

b. Maximum points per skill

c. Student's points per skill

d. Percentages per skill

e. Total points......15

f. Average score and percentage...51

g. Date corrected.....2/1

PUNCH SAMPLE	PRE %	POST. %	TO 78
	U. 32-33	U. 34-35	
	80	95	

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER ↓	ENTER POINTS PER SKILL	PRE	% ↓	POST	% ↓	POST	% ↓	POST	% ↓
X 1	5	4	80						
X									
X 2	7	4	57						
X									
X 3	5	2	40						
X									
X 4	5	5	100						
X									
X 5	7	0	0						
X									
X									
X									
X									
X									
X									

Based upon prototype originated by the Learning Research and Development Center.
As field tested by Research for Better Schools, Inc.

ipi *individually prescribed instruction*
MATHEMATICS

APPLETON—CENTURY—CROFTS
DIVISION OF MEREDITH PUBLISHING COMPANY
440 Park Avenue South, New York, N. Y. 10016

MATHEMATICS UNIT TEST RECORD

NAME Joe Bowen

NUMBER 0976

CLASS 3

NUMERATION (Ø1)		Level B						Level C						Level						Level						Level				
		1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post		
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	
	Max.Pts.	18/24		21/24				35/50		45/50																				
PLACED AT LEVEL B	Score	75%		88				70		90																				
	Date	9/21		10/1				11/1		11/21																				
PLACE VALUE (Ø2)		Level B						Level C						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.	14/22		20/22				24/31		27/31																				
PLACED AT LEVEL B	Score	64%		91				77		87																				
	Date	10/2		10/15				11/22		12/4																				
ADDITION (Ø3)		Level						Level C						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.							40/57		55/57																				
PLACED AT LEVEL C	Score							70		96																				
	Date							12/5		1/8																				
SUBTRACTION (Ø4)		Level						Level C						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.							50/60		55/60																				
PLACED AT LEVEL C	Score							83		92																				
	Date							1/9		1/31																				
MULTIPLICATION (Ø5)		Level						Level						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.																													
PLACED AT LEVEL D	Score																													
	Date																													
DIVISION (Ø6)		Level						Level						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.																													
PLACED AT LEVEL D	Score																													
	Date																													
COMBINATION OF PROCESSES (Ø7)		Level						Level						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3

Based upon prototype originated by the Learning Research and Development Center.
As field tested by Research for Better Schools, Inc.

ipi individually prescribed instrution
MATHEMATICS

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440 Park Avenue South, New York, N. Y. 10016

MATHEMATICS UNIT TEST RECORD

NAME Joe Bowen

NUMBER 0976

CLASS 3

		Level B						Level C						Level						Level						Level				
FRACTIONS (08)		1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post		
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.	15/20		19/20				15/29																						
PLACED AT LEVEL B	Score	75%		95				51%																						
	Date	10/10		10/28				2/1																						
MONEY (09)		Level						Level						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.																													
PLACED AT LEVEL C	Score																													
	Date																													
TIME (10)		Level						Level												Level						Level				
				1	2	3	4															1	2	3	4			1	2	3
	Max.Pts.																													
PLACED AT LEVEL C	Score																													
	Date																													
SYSTEMS OF MEASUREMENT (11)		Level						Level																		Level				
				1	2	3	4															1	2	3	4			1	2	3
	Max.Pts.																													
PLACED AT LEVEL D	Score																													
	Date																													
GEOMETRY (12)		Level						Level						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.																													
PLACED AT LEVEL C	Score																													
	Date																													
SPECIAL TOPICS (13)		Level						Level						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3
	Max.Pts.																													
PLACED AT LEVEL	Score																													
	Date																													
ADDITION AND SUBTRACTION		Level						Level						Level						Level						Level				
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3

The Aide will enter Pretest information on the Unit Test Record:

a. Level..............C

b. Maximum Points...15/29

c. Score............51%

d. Date Pretest corrected...2/1

You examine the Pretest starting on page 15. On your Prescription Sheet, you circle the skills in C-Frac. that are below 85% and require a prescription. You record these skill numbers next to C-FRAC. in unit space at the top of the Prescription Sheet.

You examine the entire Pretest and make a general statement about Joe's performance on the entire test.

Joe can: Identify figures divided into fourths and halves; circle sets to show equal fractional parts; match shaded figures and printed fractions.

Joe cannot: Identify figures divided into thirds; match shaded figures and circle sets to show 1/3.

You analyze Joe's behavior:

a. You describe behaviors which will facilitate learning: Joe reads well and can interpret written directions; he can work independently.

   You state how your prescription will take these behaviors into account:

   Peer tutoring and independent study will be prescribed.

b. You describe behaviors which will hamper learning: Joe plays with manipulative devices.

   You state how your prescription will take these behaviors into account:

   Purposes of using manipulative aids will be explained to Joe and supervision will accompany a prescription for aids.

You select the first skill requiring a prescription. This is Skill 1.

You record the date, your initials, Skill # 1 and Read Student Page on line 2 of the Prescription Sheet on p. 44.

Before writing the prescription, you write what Joe must learn (p. 20 of STS booklet): Divide a whole object into 1/2's, 1/3's or 1/4's and identify objects divided into 1/2's, 1/3's or 1/4's.

You analyze Joe's work on Pretest Skill 1:

Joe can: Identify a figure that is divided into 1/2's and 1/4's

Joe cannot: Identify a figure that is divided into 1/3's when unusual divisions are presented.

You describe what Joe must learn for Skill 1: Divide objects into 1/3's and identify objects that have been divided into 1/3's.

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF

SCHOOL STAMP U. S. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER 0 9 7 6 U. S. 4 5 6 7

GRADE 3 U. S. 9

ROOM 107

UNIT C-Frac. 1,2,3,5 U. S. 10 11 12

UNIT DATES		
UNIT BEGAN	2/1	U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	2/1	MB	Pretest											
2	2/1	MB	1	Read Student Page										
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

H SAMPLE

E % 32-33 80

POST. % U. 34-35 95

TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X ①	5	4	80						
X									
X ②	7	4	57						
X									
X ③	5	2	40						
X									
X 4	5	5	100						
X									
X ⑤	7	0	0						
X									
X									
X									
X									

This is a copy of the STS booklet for Skill 1.

You examine all the skill sheets and STS sheets (pp. 20-21) in the booklet to become familiar with materials for this skill.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 1, in particular), you decide to prescribe the following on 2/2:

Page	Reason
Student Page	Introduces skill; previews work
4	Introduces concept of 1/3
5	Dividing objects into 1/3's
6	Identifying objects divided into 1/3's
Fraction Pies 12 Mark S. 02	Manipulating objects divided into thirds with help of and supervision by Mark S.

You estimate the time needed as: 2 class periods

After you recheck these three pages, you record the page numbers and the date on lines 3-7 of Joe's Prescription Sheet.

SCHOOL CODE

NAME ______________________________

NUMBER ______________ CLASS ______________

ipi

individually prescribed instruction

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

FRACTIONS (08)

SKILL 1

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

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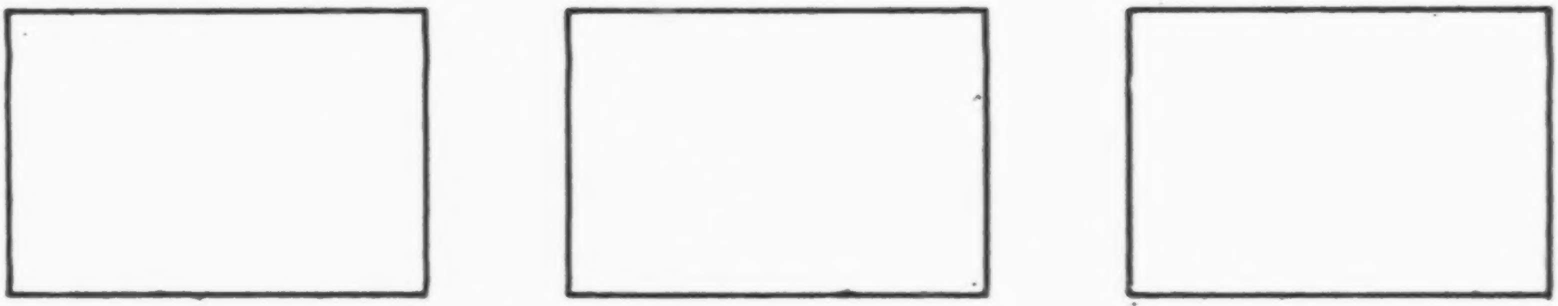
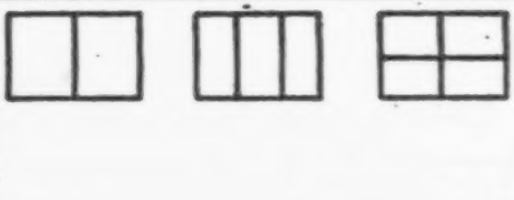
DEVELOPMENTAL EDITION

TO THE STUDENT

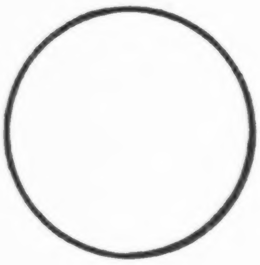
Divide the first box into halves, the second box into thirds and the last box into fourths.



Answers

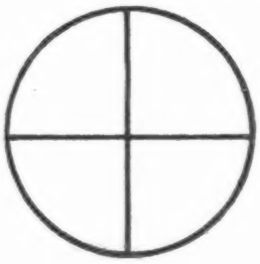


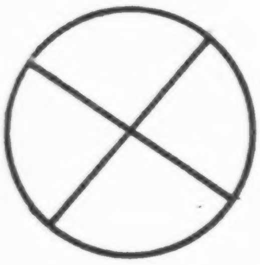
Fill in the blanks.



This is a circle.

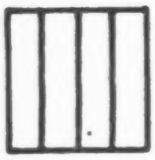
This circle is divided into
4 equal parts.





How many equal parts is this circle
divided into? 4

When an object is divided into 4 equal parts, we say the object is divided into fourths.

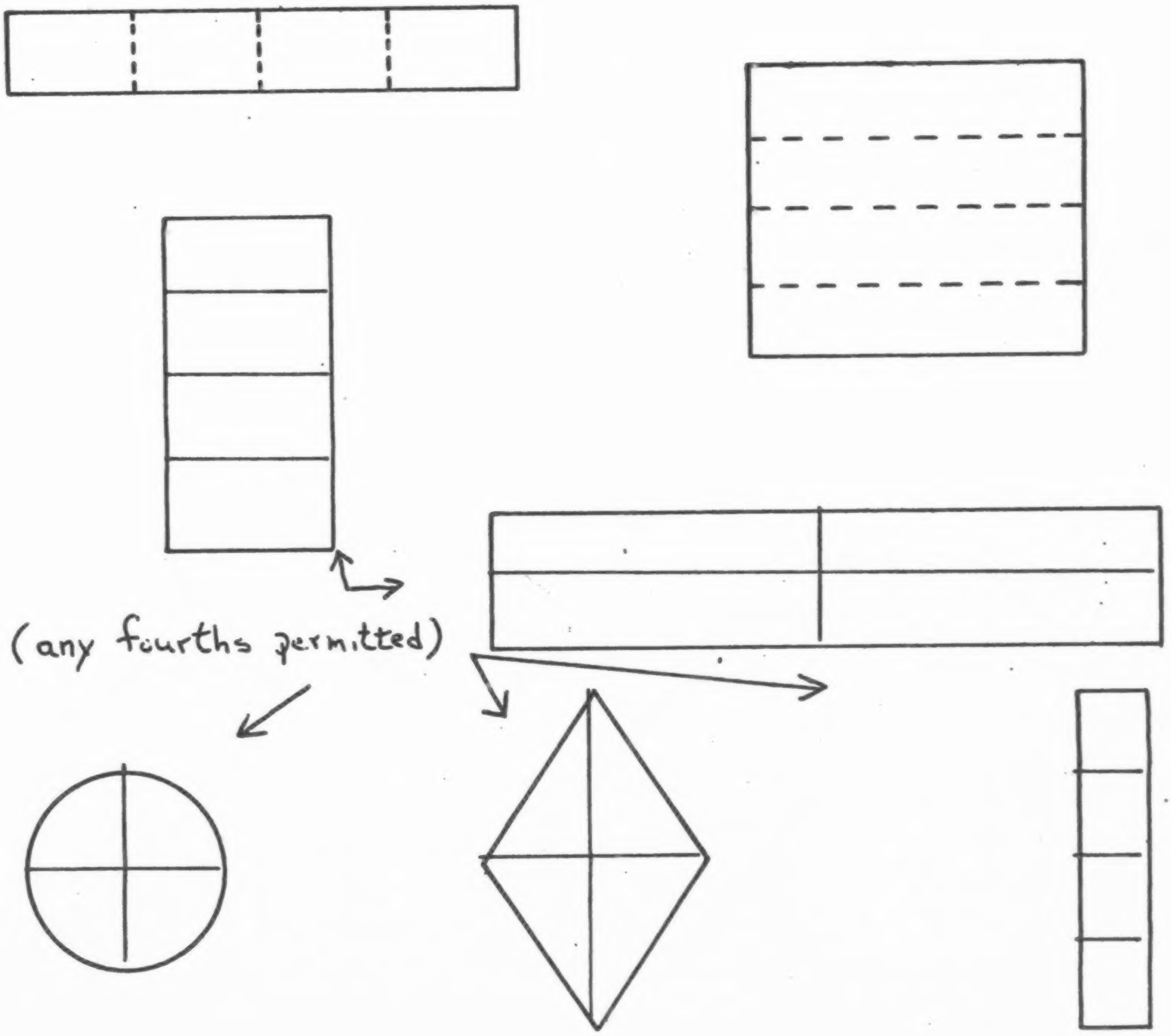


This box is divided into 4
equal parts or into fourths.

For extra practice, do Page 12.

When an object is divided into 4 equal parts, it is divided into fourths.

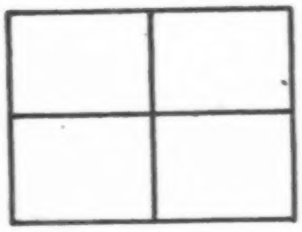
Divide the objects below into fourths.



All these objects are now divided into 4 equal parts, or into fourths.

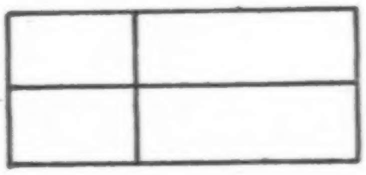
For extra practice, do Page 13.

This box is divided into fourths.

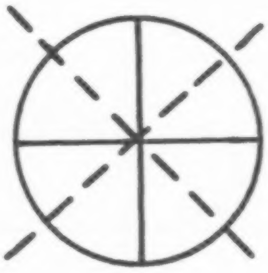


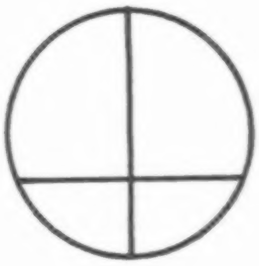
This box is not divided into fourths. Why not?

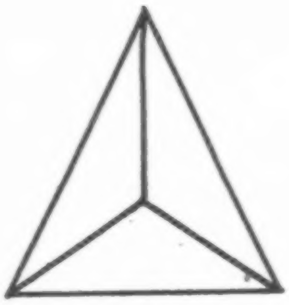
It is not divided equally into 4 parts. (Or any similar answer)

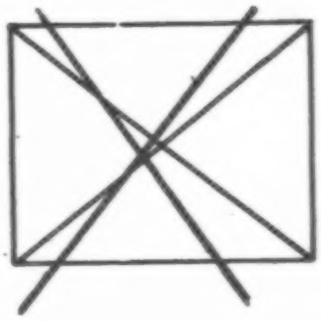


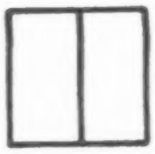
Put an X on the figures that are divided into fourths.

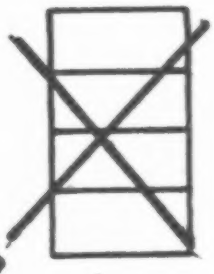


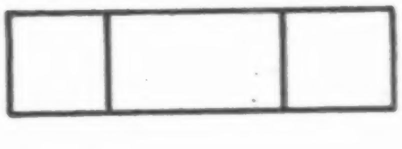


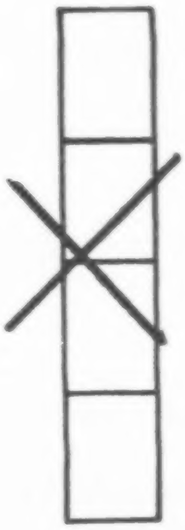


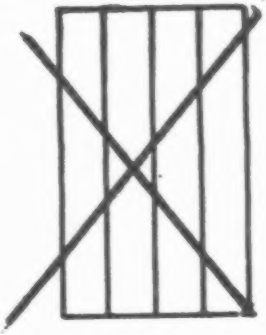


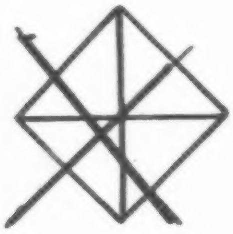






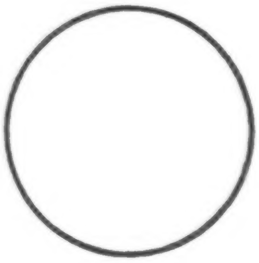






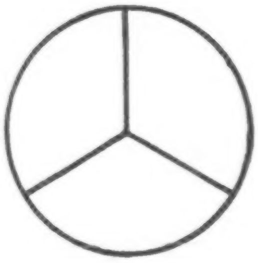
For extra practice, do Page 14.

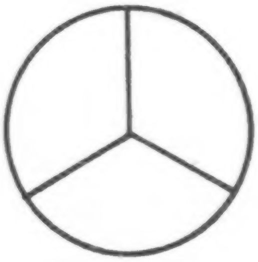
Fill in the blanks.



This is a circle.

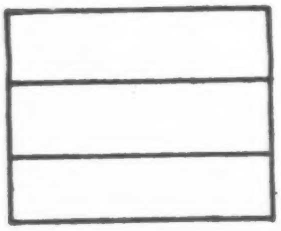
This circle is divided into
3 equal parts.





How many equal parts is this circle
divided into? 3

When an object is divided into 3 equal parts, we say the object is divided into thirds.

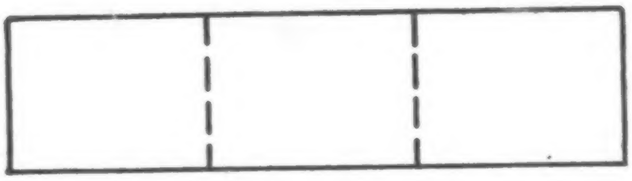


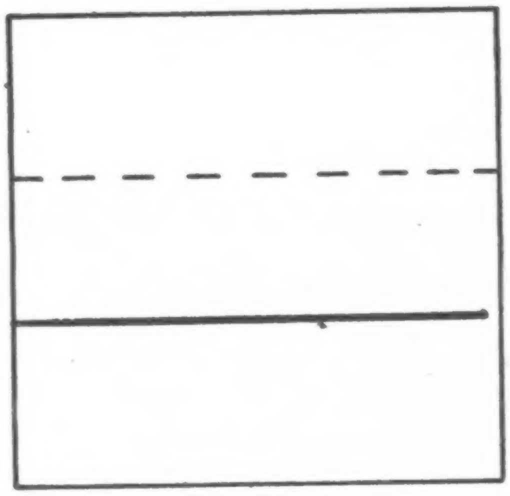
This box is divided into 3
equal parts, or into thirds

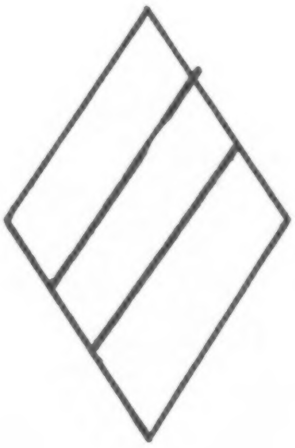
For extra practice, do Page 15.

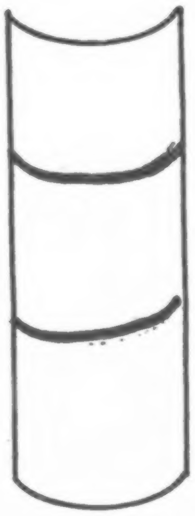
When an object is divided into 3 equal parts, it is divided into thirds.

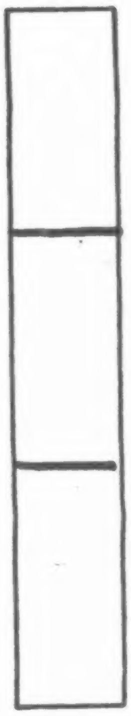
Divide the objects below into thirds.

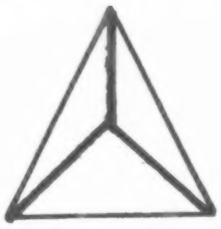


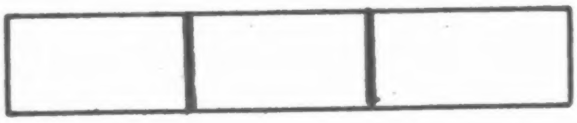




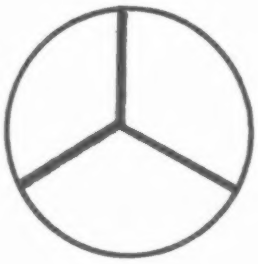






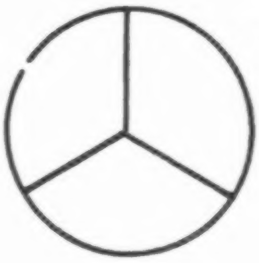


Scoring note: Accept (any equal division into 3 parts.)

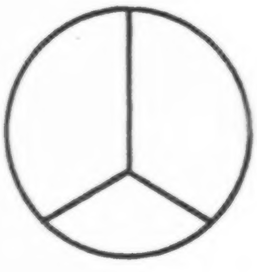


All these objects are now divided into 3 equal parts, or into thirds

For extra practice, do Page 16.



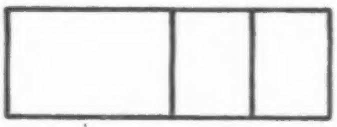
This circle is divided into thirds

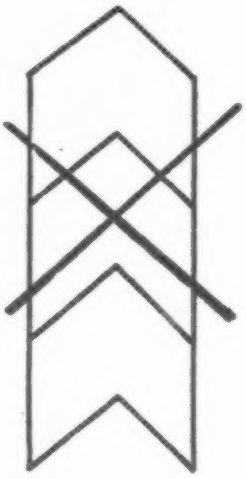


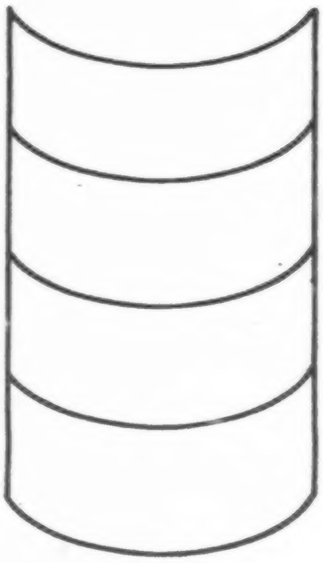
This circle is not divided into thirds. Why not?

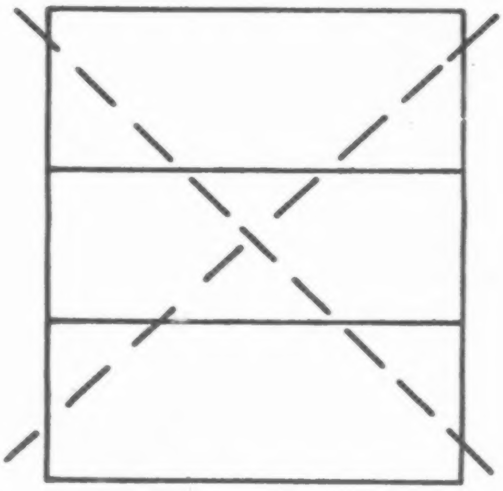
Because it is not divided into 3 equal parts (or similar answer)

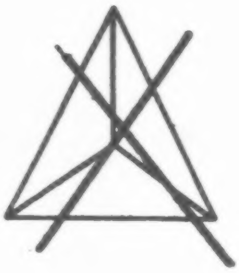
Put an X on the figures that are divided into thirds.

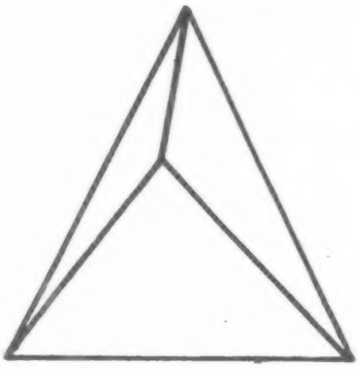


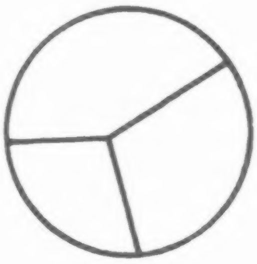


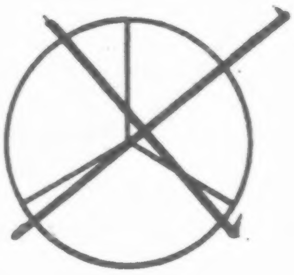








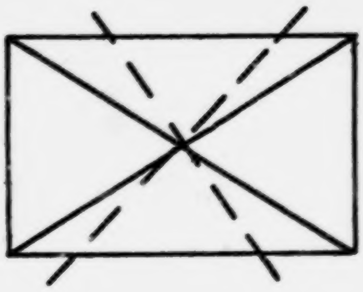


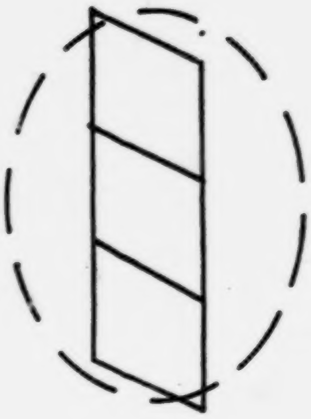


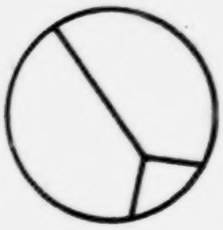
For extra practice, do Page 17.

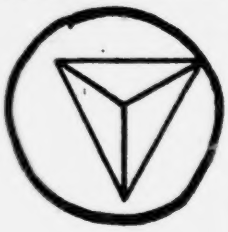
Put an X on all the shapes that are divided into fourths.

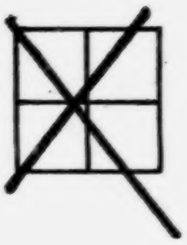
Put a circle around all the shapes that are divided into thirds.

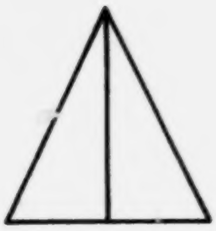


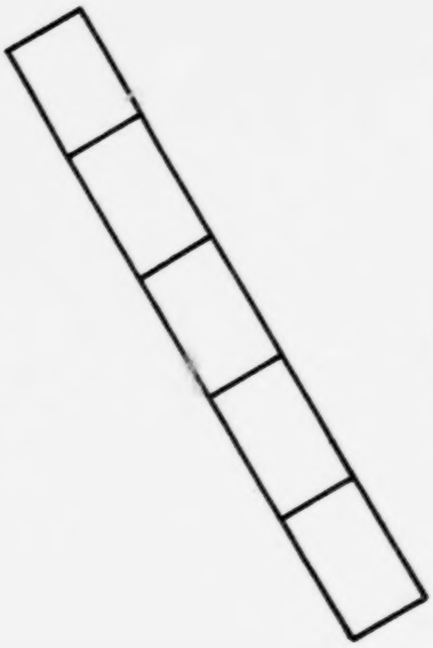


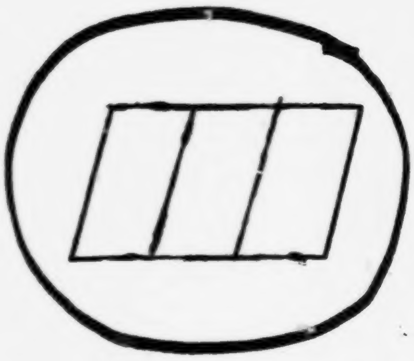


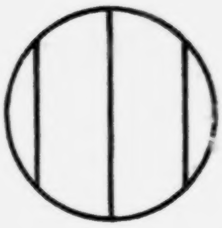


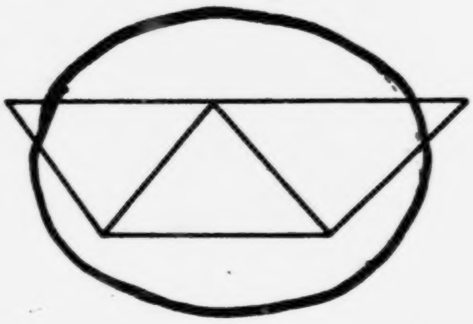


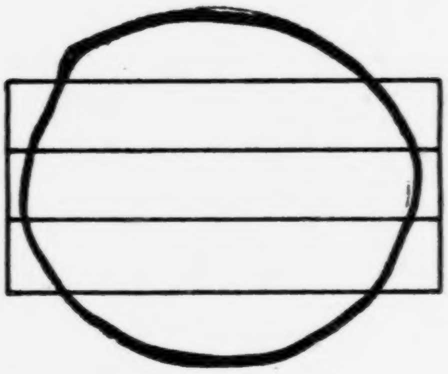


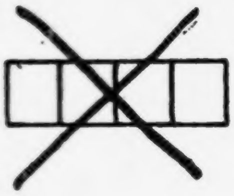








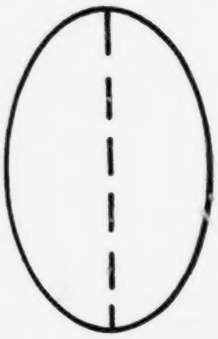


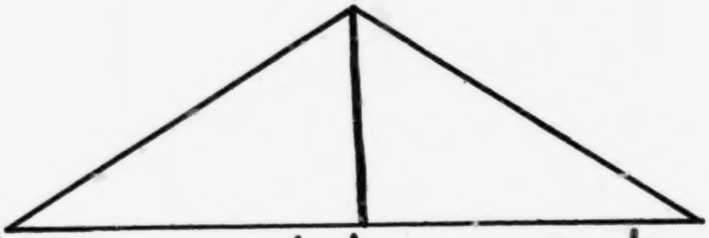


7

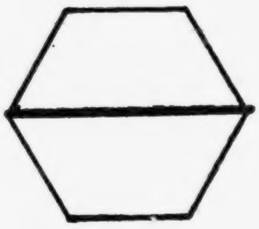
When an object is divided into 2 equal parts, we say it is divided into halves.

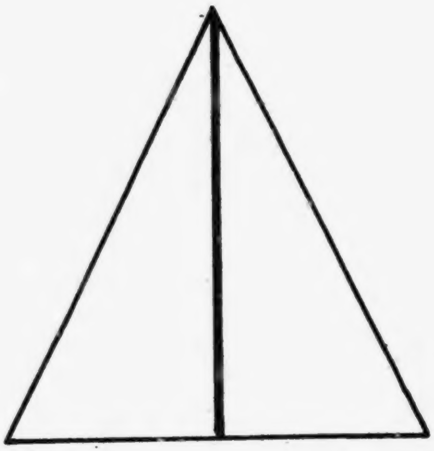
Divide these objects into halves.

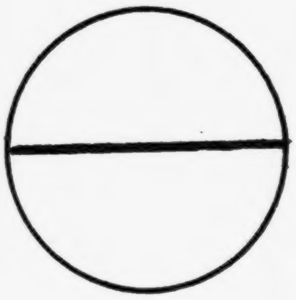


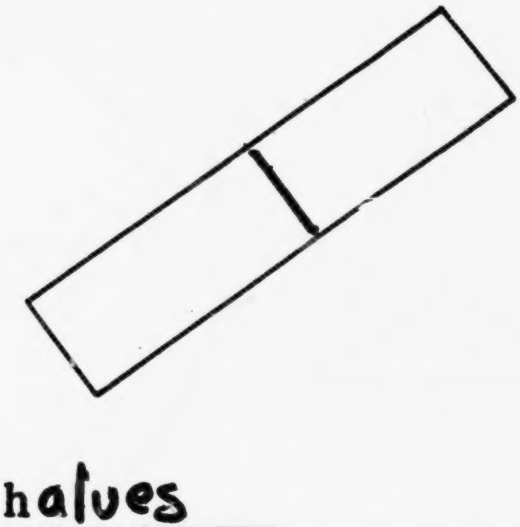


any equal division into ½



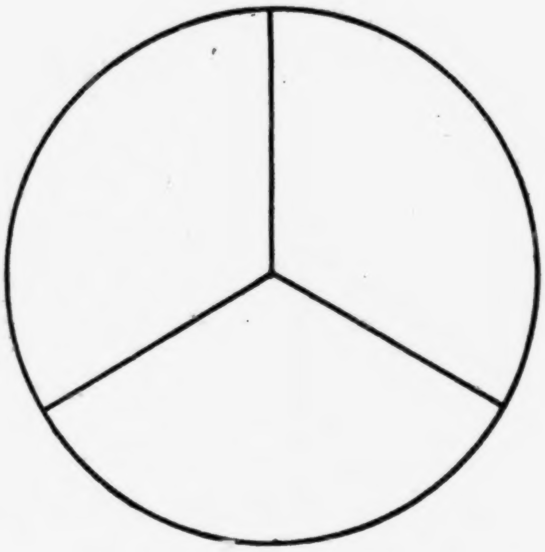


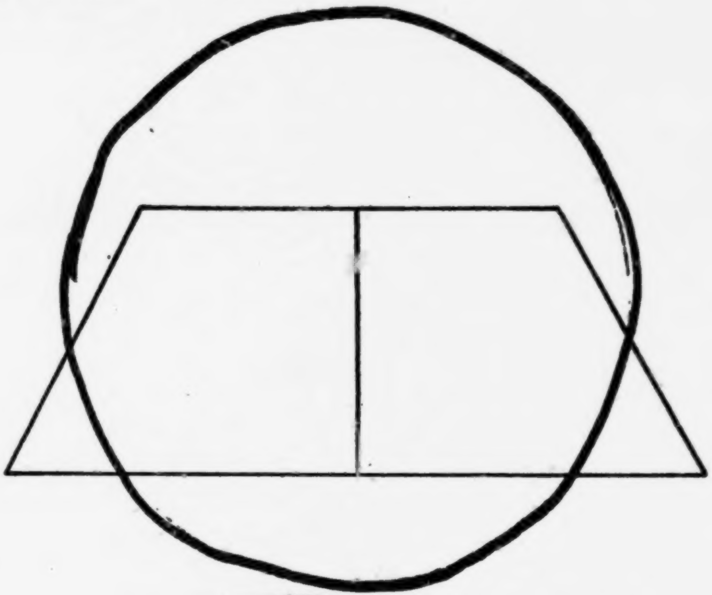


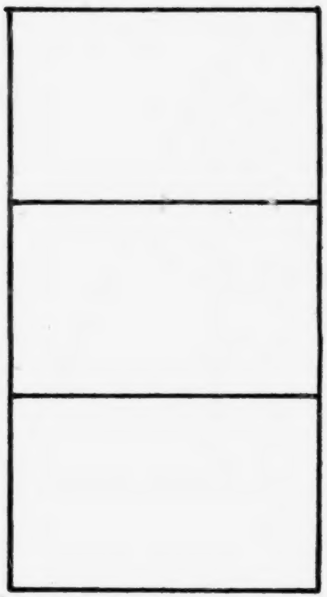


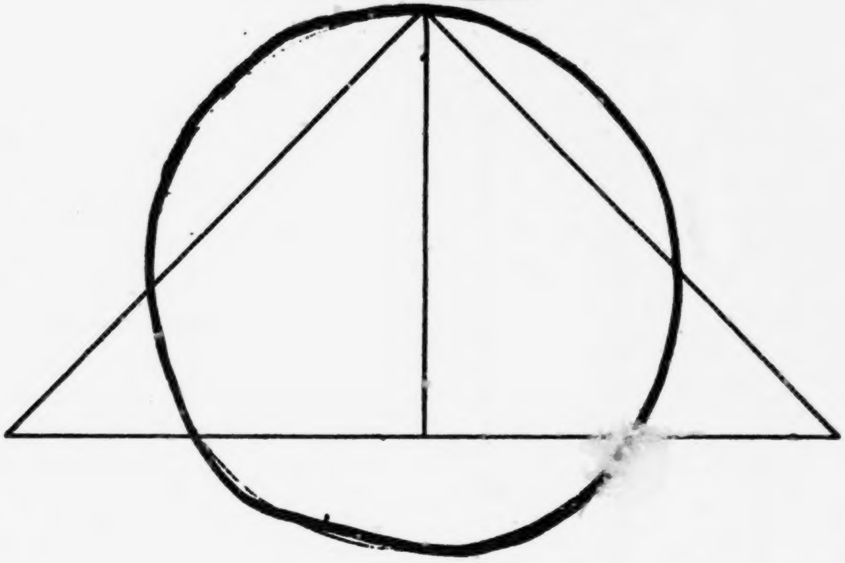
All these objects are now divided into halves

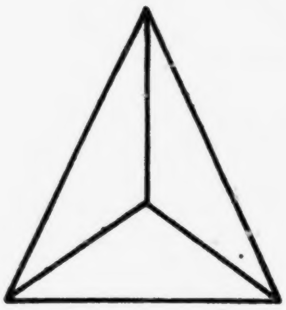
Circle the objects which are divided into halves.

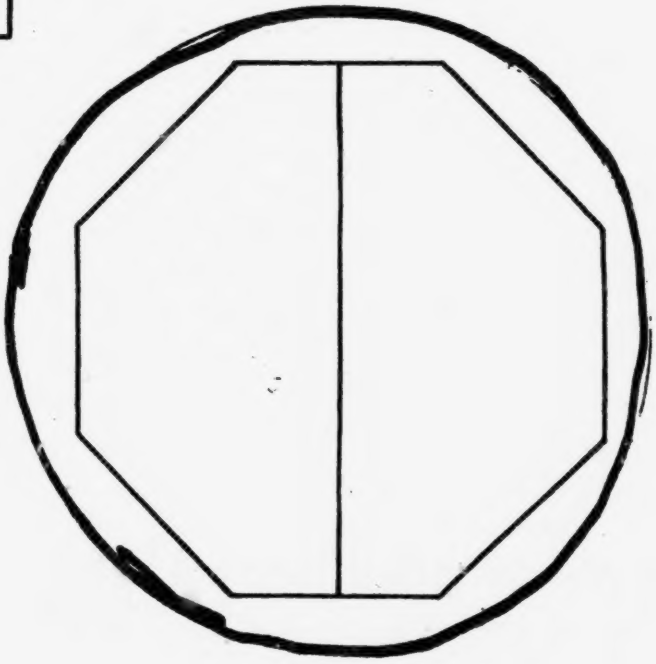


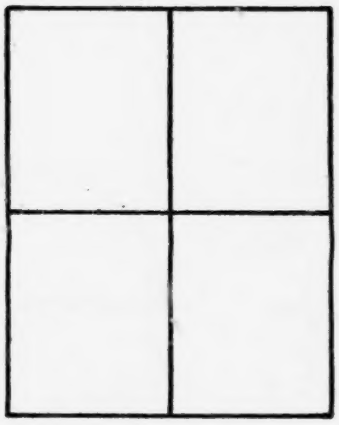






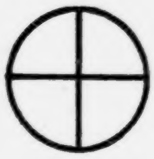






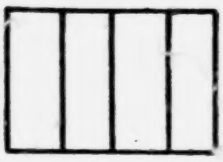
How is the picture divided?

Draw a circle around the correct answer.



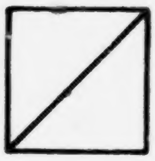
is divided into

thirds halves [✓ fourths]



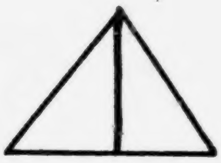
is divided into

[✓ fourths] thirds halves



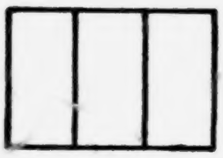
is divided into

[✓ halves] thirds fourths



is divided into

[✓ halves] thirds fourths



is divided into

fourths [✓ thirds] halves

For extra practice, do Page 18.

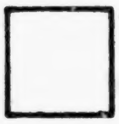
CET I

CIRCLE CORRECT BOX

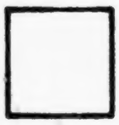
TL. PTS.	
17	100%
NO. OF PTS.	%
16	94
15	88
14	82
13	76
12	71
11	65
10	59
9	53
8	47
7	41
6	35
5	29
4	24
3	18
2	12
1	6

Divide the figure into the parts name below each figure.

halves

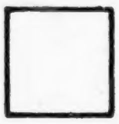


thirds



fourths

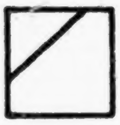
fourths

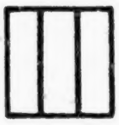


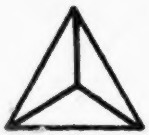
halves

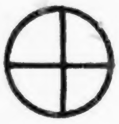
Put an X on each figure in the row that is divided the way the word says.

thirds

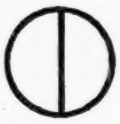


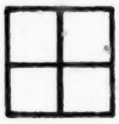


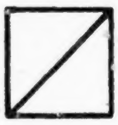


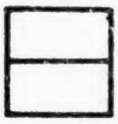


halves

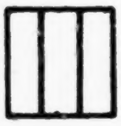


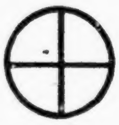


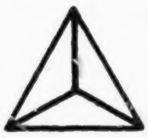


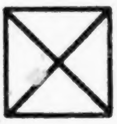


fourths

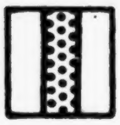




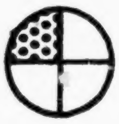




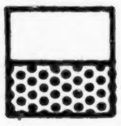
Circle the fraction that tells how much of each figure is shaded.



$\frac{1}{3}$ $\frac{1}{2}$ $\frac{1}{4}$



$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$



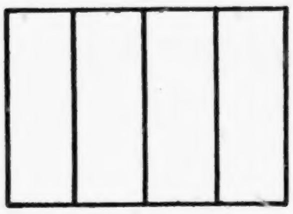
$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$

CIRCLE CORRECT BOX

TL. PTS.	
3	100%
NO. OF PTS.	%
2	67
1	33

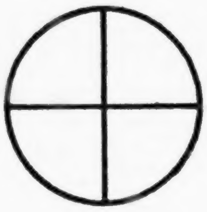
Fill in the blanks.

This box is divided into fourths.



It is divided into 4 equal parts.

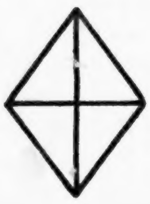
If an object is divided into 4 equal parts, we say it is divided into fourths.



How many equal parts is this circle divided into? 4

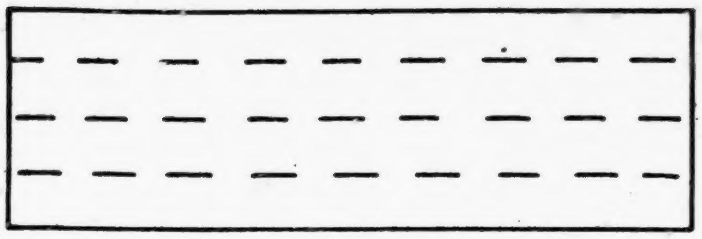
Therefore, we say the circle is divided into fourths.

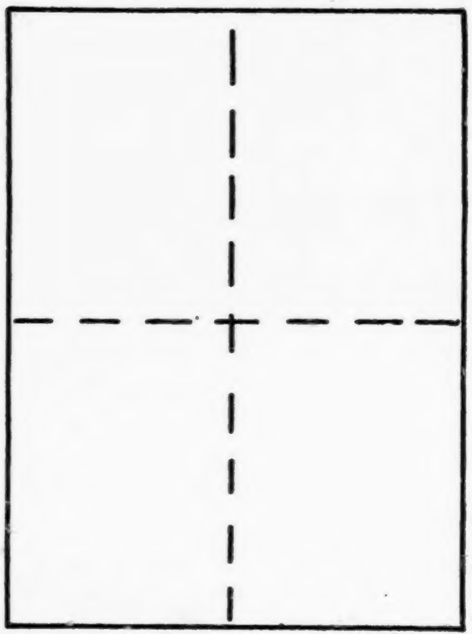
Is this figure divided into fourths? yes

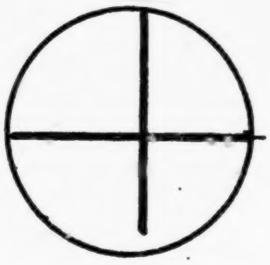


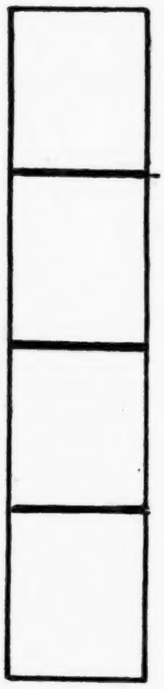
When an object is divided into 4 equal parts, it is divided into fourths.

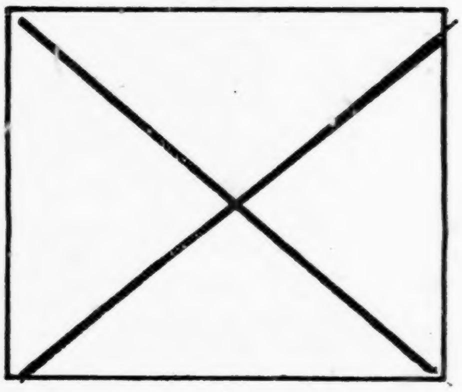
Divide the objects below into fourths.







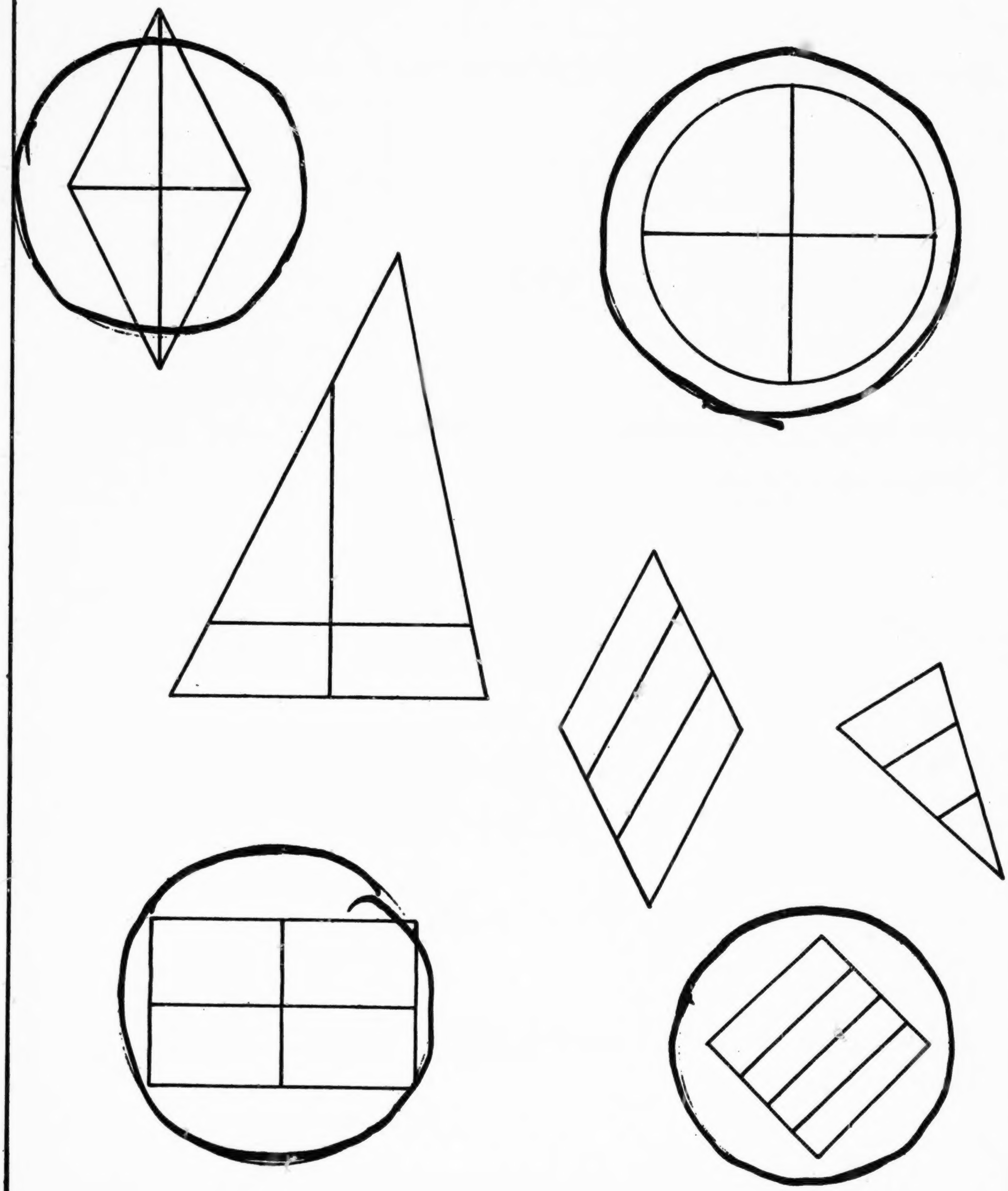




(any equal division into fourths.)

Page 14

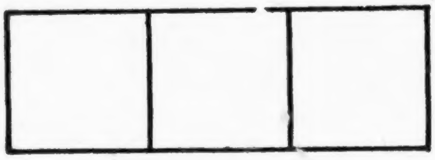
Put a circle around all the objects that are divided into fourths.



Fill in the blanks.

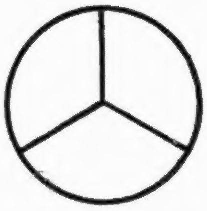
How many pieces is the box divided into?

3



Are all the pieces equal? yes

When an object is divided into 3 equal parts, we say it is divided into thirds.



Is this circle divided into 3 equal parts?

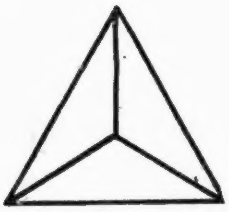
yes

Is it divided into thirds? yes

Is this triangle divided into 3 equal parts?

yes

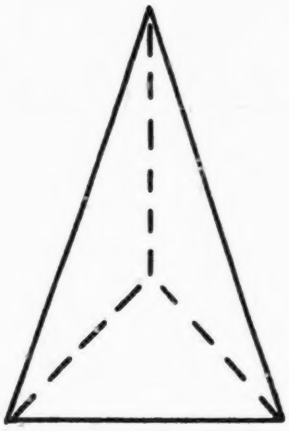
The triangle is divided into thirds.

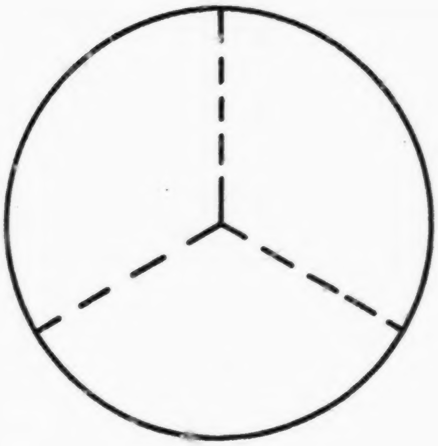


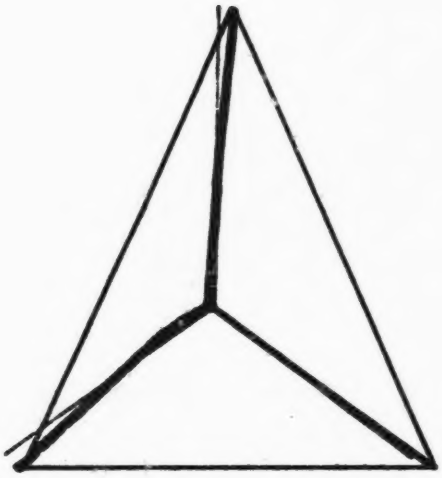
Page 16

When an object is divided into 3 equal parts, it is divided into thirds.

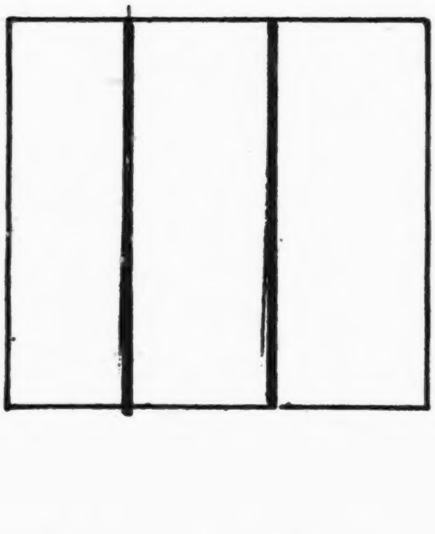
Divide these objects into thirds.

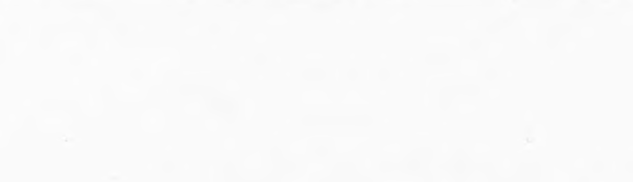




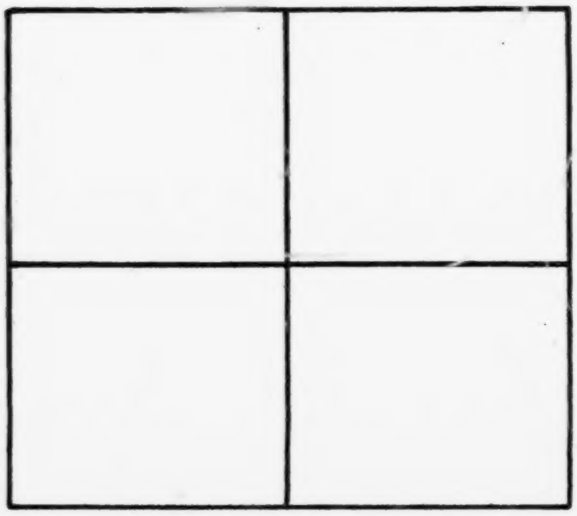


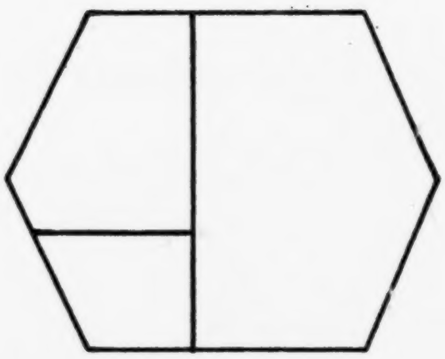
Scoring note: Accept (any equal division into thirds.)

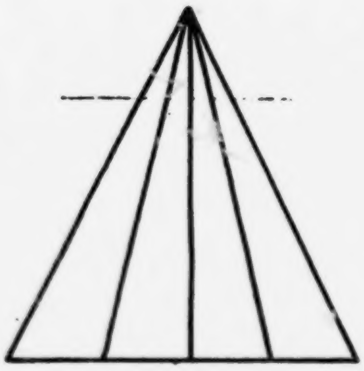


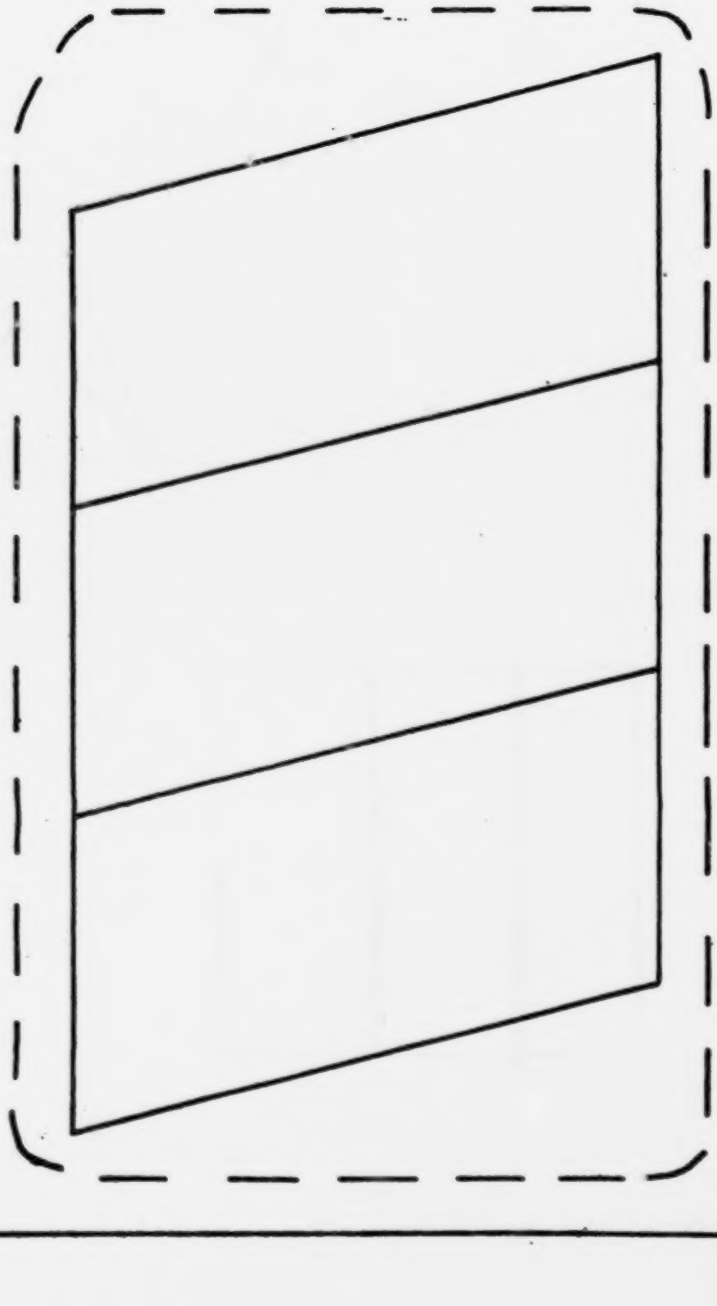


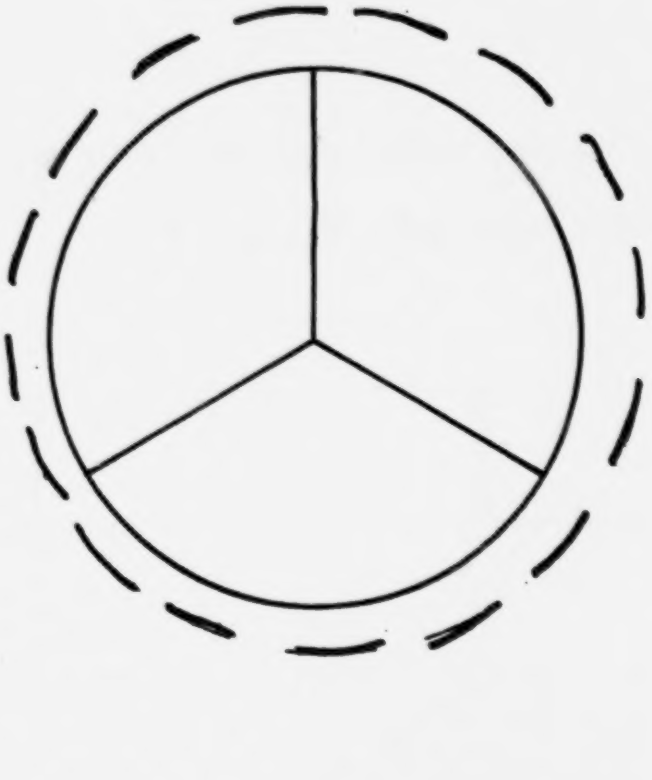
Circle the objects which are divided into thirds.



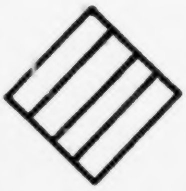




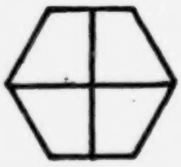




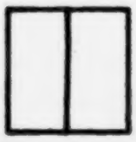
Draw a circle around the word which tells how the object is divided.

 **is divided into**

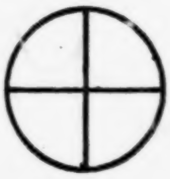
halves
thirds
[✓ fourths]



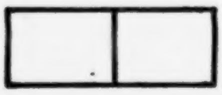
halves
thirds
[✓ fourths]



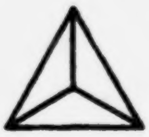
[✓ halves]
thirds
fourths



halves
thirds
[✓ fourths]



[✓ halves]
thirds
fourths



halves
[✓ thirds]
fourths

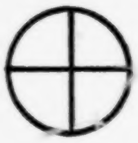
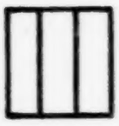
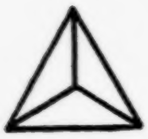
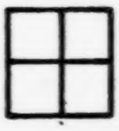
CET II

CIRCLE CORRECT BOX

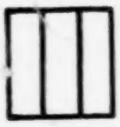
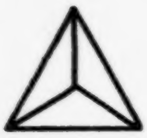
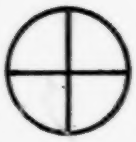
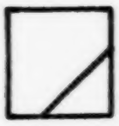
TL. PTS.	
17	100%
NO. OF PTS.	%
16	94
15	88
14	82
13	76
12	71
11	65
10	59
9	53
8	47
7	41
6	35
5	29
4	24
3	18
2	12
1	6

Put an X on each figure in the row that is divided the way the word says.

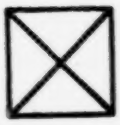
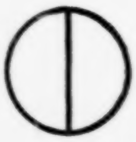
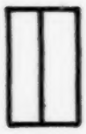
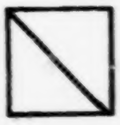
fourths

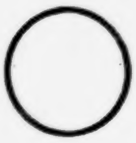
thirds

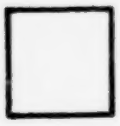





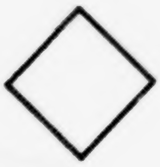
halves

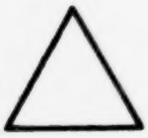





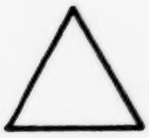
Divide the figure into the parts named by the word under each figure.


thirds


halves


fourths

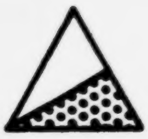

halves

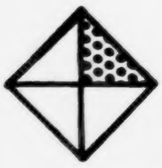

thirds

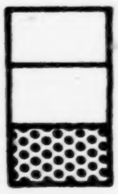
CIRCLE CORRECT BOX

TL. PTS.	
3	100%
NO. OF PTS.	%
2	67
1	33

Circle the fraction that tells how much of each figure is shaded.


$\frac{1}{2}$ $\frac{1}{3}$ $\frac{1}{4}$


$\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{2}$


$\frac{1}{3}$ $\frac{1}{2}$ $\frac{1}{4}$

LEVEL C, FRACTIONS, SKILL 1

OBJECTIVE: Divides a whole object into halves, thirds, or fourths, or identifies an object divided into halves, thirds, or fourths.

STANDARD TEACHING SEQUENCE

Pages		Supplementary Material
1.	Says that an object is divided into 4 equal parts or into fourths.	12
2.	Divides objects into fourths.	13
3.	Puts an X on figures that are divided into fourths, rejecting all figures not divided into 4 equal parts.	14
4.	Says that an object is divided into 3 equal parts or into thirds.	15
5.	Divides objects into thirds.	16
6.	Puts an X on figures that are divided into thirds, rejecting all figures not divided into 3 equal parts.	17
7.	Puts an X on all the shapes that are divided into fourths. Puts a circle around all the shapes that are divided into thirds. Rejects shapes that fit in neither category.	
8.	Divides objects into halves.	
9.	Circles the objects which are divided into halves.	
10.	Circles the word which tells whether a given object is divided into halves, thirds, or fourths.	18
11.	CET I.	
	CET II.	19

Circle pages that are to be done.

Standard Teaching Sequence, Con't

1967 - 68

Teaching Aids:

- Fraction pies
- Ideal fraction wheel
- Instructo flannel board
- Fractional parts - squares - circles
- Teacher's fraction kit - flannel board
- Ideal Fractions Made Easy
- Creative Playthings Simple Fractions Kit
- Milton Bradley fraction parts on a board

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1965 Two By Two (Grade 2)	58	

These are the three skill sheets completed by Joe and corrected by the Aide.

You study the scores and look at Joe's work on the skill sheets:

Joe can: Write about the concept of 1/3's.

Joe cannot: Identify objects divided into 1/3's when unusual shapes are presented.

You describe how Joe worked with this prescription: He benefited from the peer tutoring and worked well independently, too.

Based on your analysis of Joe's work, you decide to:

_____ Revise original prescription
__X__ Extend prescription
_____ Assign a CET

Why? Joe must learn to identify multi-shaped objects that are divided into 1/3's.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 1, in particular) and on these skill sheets, you decide to prescribe the following on 2/4:

Page	Reason
16	Divides objects into thirds
17	Identifies multi-shaped objects that are divided into thirds

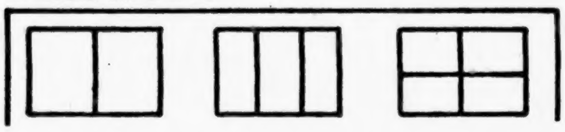
You estimate the time needed as: 30 minutes maximum

After you recheck these two pages, you record the page numbers and the date on lines 8-9 of Joe's Prescription Sheet.

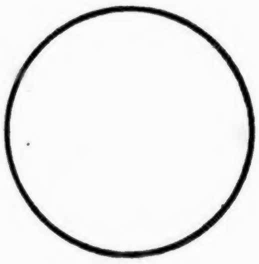
TO THE STUDENT

Divide the first box into halves, the second box into thirds and the last box into fourths.

Answers

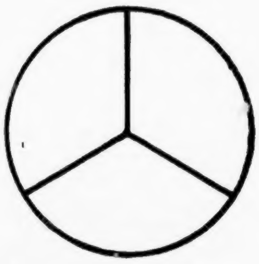


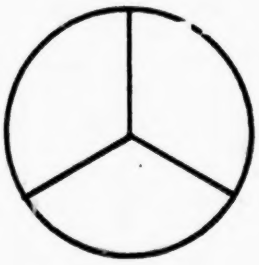
Fill in the blanks.



This is a circle.

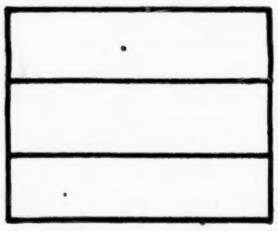
This circle is divided into
3 equal parts.





How many equal parts is this circle
divided into? 3

When an object is divided into 3 equal parts, we say the object is divided into thirds.



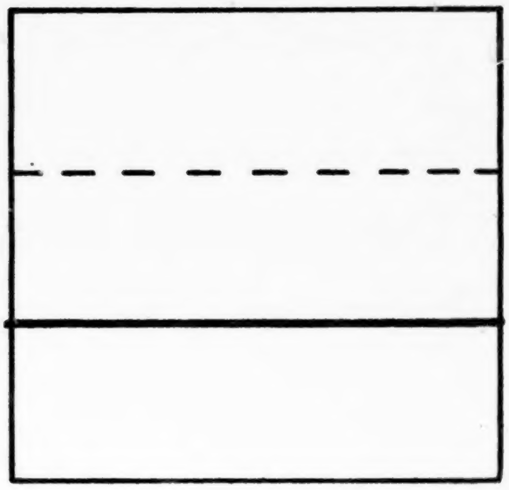
This box is divided into 3
equal parts, or into thirds.

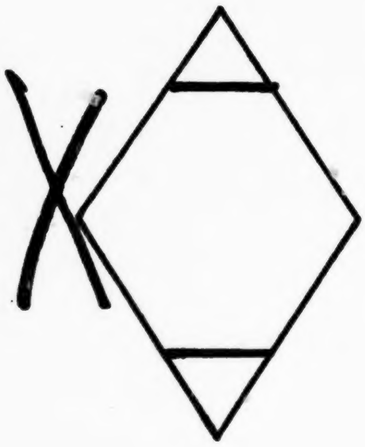
For extra practice, do Page 15.

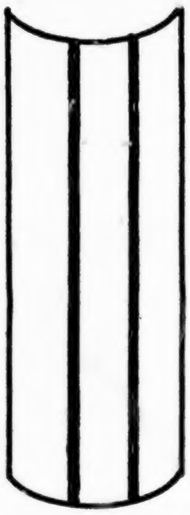
Page 5

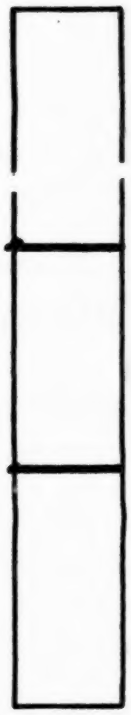
When an object is divided into 3 equal parts, it is divided into thirds.

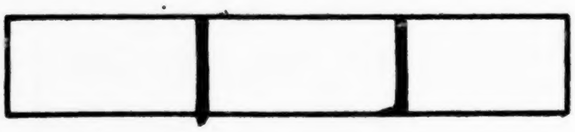
Divide the objects below into thirds.

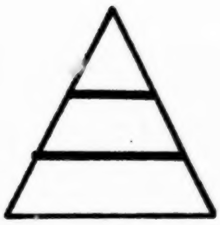


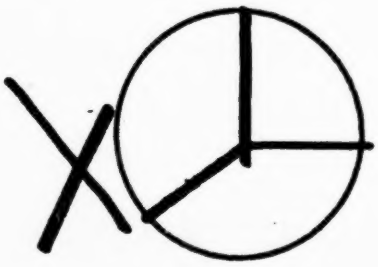








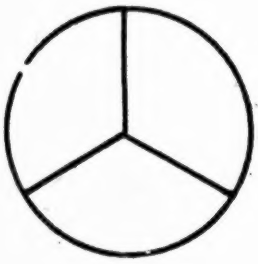




All these objects are now divided into 3 equal parts, or into thirds.

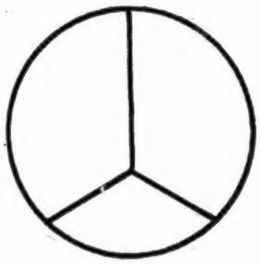
For extra practice, do Page 16.

Page 6



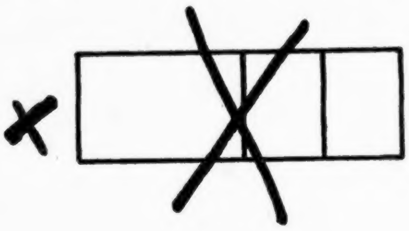
This circle is divided into thirds.

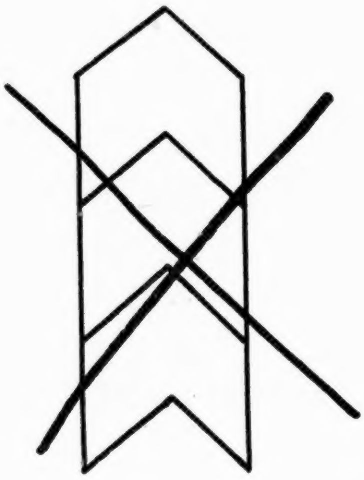
This circle is not divided into thirds. Why not?

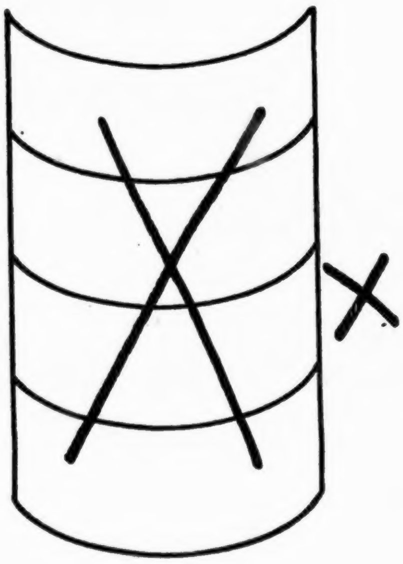


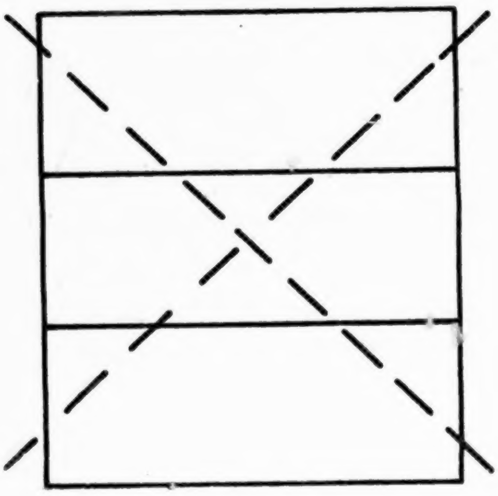
Parts are not equal.

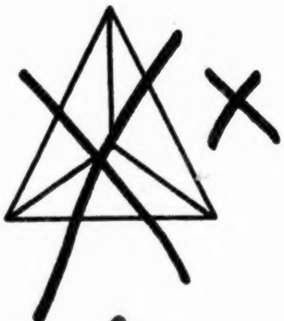
Put an X on the figures that are divided into thirds.

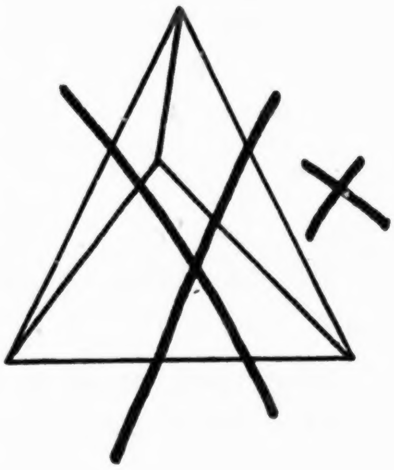


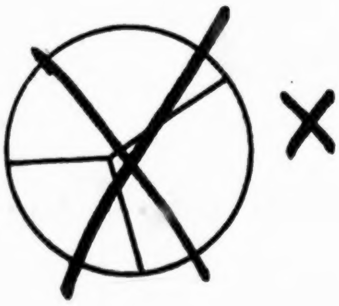


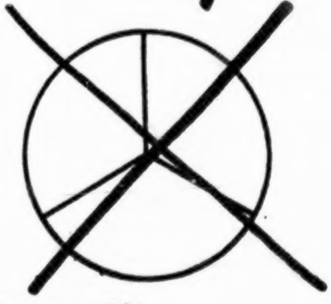












For extra practice, do Page 17.

These are the two skill sheets completed by Joe and corrected by the Aide.

You study the scores and look at Joe's work on the skill sheets:

Joe can: Identify objects that are divided into 1/3's; divide objects into 1/3's.

Joe cannot: - - -

You describe how Joe worked with this prescription: Joe worked quickly, independently.

Based on your analysis of Joe's work, you decide to:

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
X Assign entire CET for skill 1.

Why? His work on skill sheets indicates mastery of skill 1.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 1, in particular) and on these skill sheets, you decide to prescribe the following on 2/4:

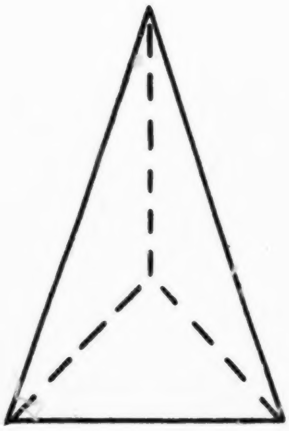
Page	Reason
11	CET to test mastery of skill 1

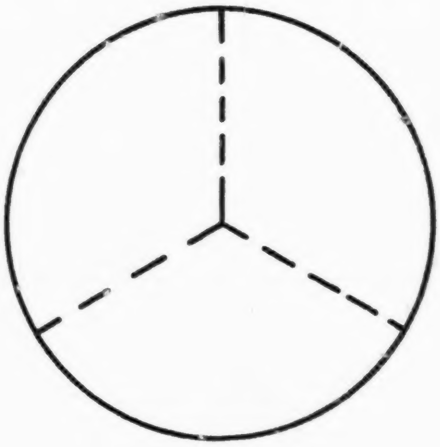
You estimate the time needed as: 20 minutes maximum

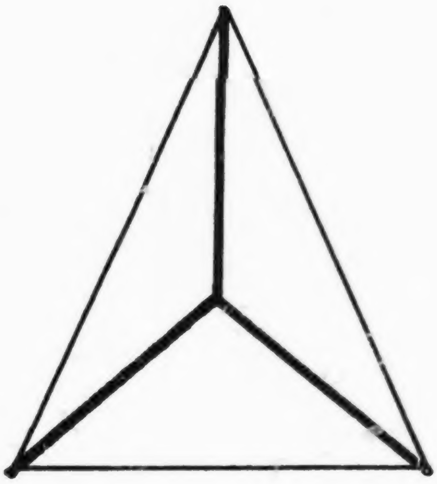
After you recheck this CET, you record the page number and the date on line 10 of Joe's Prescription Sheet.

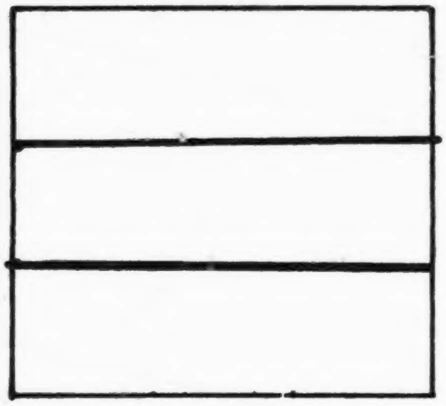
When an object is divided into 3 equal parts, it is divided into thirds.

Divide these objects into thirds.



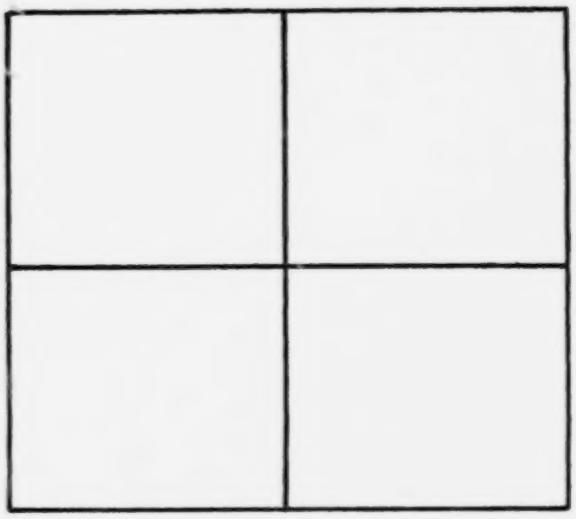


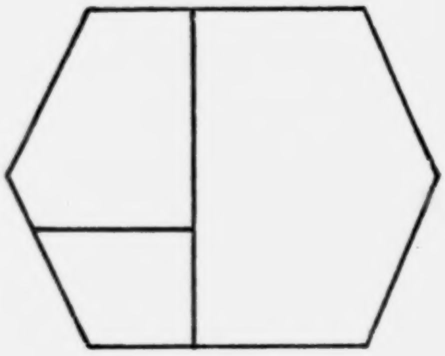


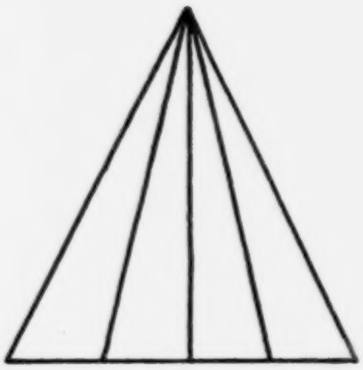


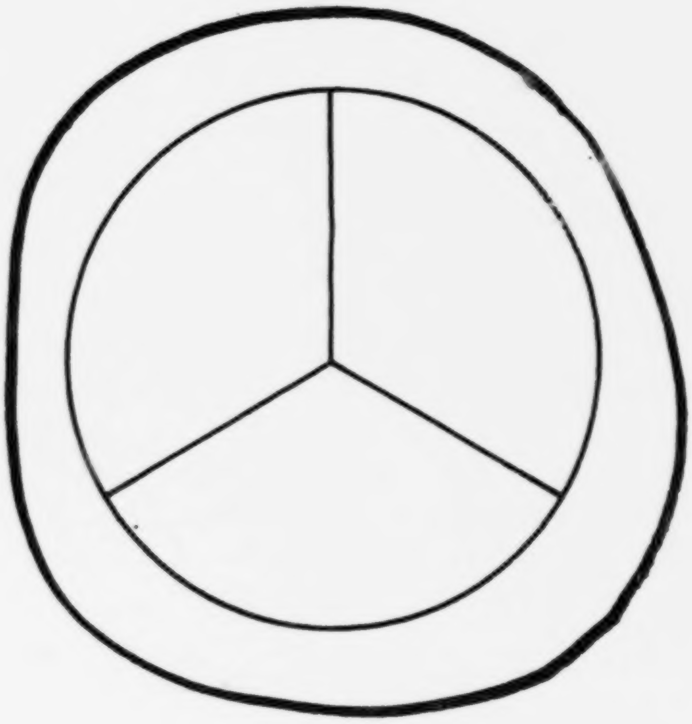
Page 17

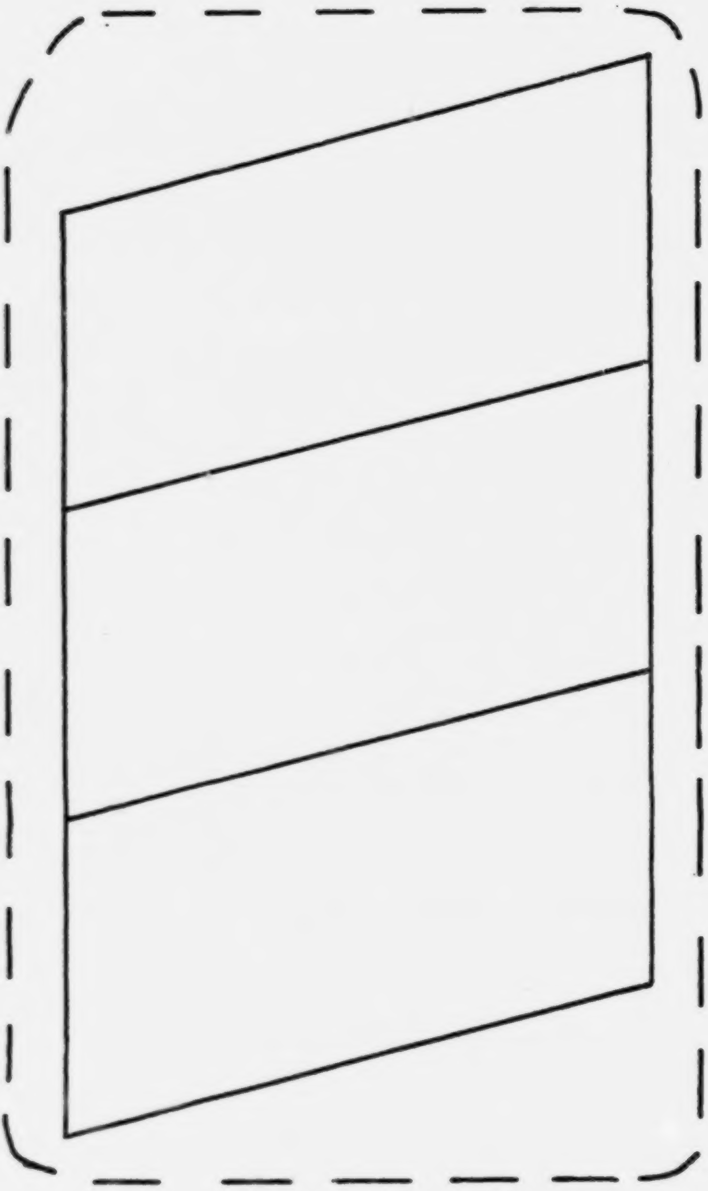
Circle the objects which are divided into thirds.











This is the CET completed by Joe and corrected by the Aide.

You record (in the role of Aide) the scores on the Prescription Sheet.

You look at Joe's work on the CET:

Joe can: Part I - Identify and divide objects into 1/3's. Part II - Match a divided object with written fractions of 1/3, 1/2, 1/4.

Joe cannot: - - -

You describe how Joe worked with this prescription: Joe worked without any teacher direction on the entire CET.

Based on your analysis of Joe's work, you decide to:

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
__X__ Assign entire CET for skill 2.
_____ Assign Part II of CET for skill ____.
_____ Write initial prescription for skill ____.

Why? Pretest score (skill 2) was 57% and the CET will determine if Joe has gained an understanding of skill 2 while he was working on skill 1.

Based on the previous diagnosis of Joe's behavior, his performance on the unit Pretest (skill 2, in particular), and Part II of CET for skill 1, you decide to prescribe the following on 2/5:

Page	Reason
14P	CET to test mastery of skill 2

(P=CET pad)

You estimate time needed as: 30 minutes maximum.

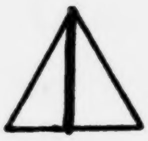
After you recheck this CET, you record the page number and the date on line 11 of Joe's Prescription Sheet.

CET I

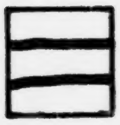
CIRCLE CORRECT BOX

TL. PTS.	
17	100%
NO. OF PTS.	%
16	94
15	88
14	82
13	76
12	71
11	65
10	59
9	53
8	47
7	41
6	35
5	29
4	24
3	18
2	12
1	6

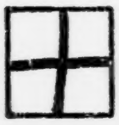
Divide the figure into the parts name below each figure.



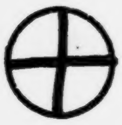
halves



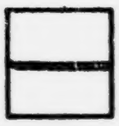
thirds



fourths



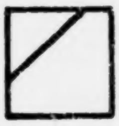
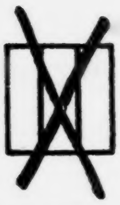
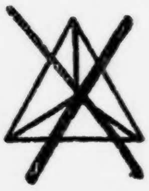
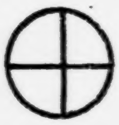
fourths



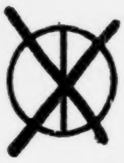
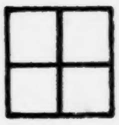
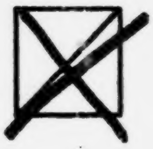
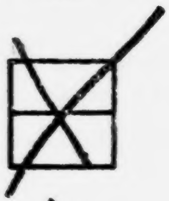
halves

Put an X on each figure in the row that is divided the way the word says.

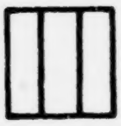
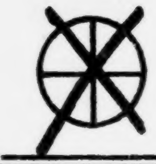
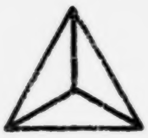
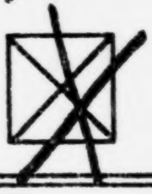
thirds

halves

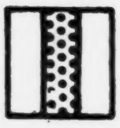
fourths

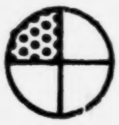
Circle the fraction that tells how much of each figure is shaded.

CIRCLE CORRECT BOX

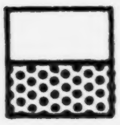
TL. PTS.	
3	100%
NO. OF PTS.	%
2	67
1	33



[✓ $\frac{1}{3}$] $\frac{1}{2}$ $\frac{1}{4}$



$\frac{1}{2}$ $\frac{1}{3}$ [✓ $\frac{1}{4}$]



[✓ $\frac{1}{2}$] $\frac{1}{3}$ $\frac{1}{4}$

This is the CET completed by Joe and corrected by the Aide.

You record (in the role of Aide) the scores on the Prescription Sheet.

You look at Joe's work on the CET:

Joe can: Part I - State the meaning of terms 1/2, 1/3, and 1/4; match shaded objects with written fractions.

Part II - Divide a set into 1/3's.

Joe cannot: Divide a set into 1/4's.

You describe how Joe worked with this prescription: Joe asked for and was allowed to use a manipulative aid (straws) on Part II but did not use them for solving the problems. He played with them.

Based on your analysis of Joe's work, you decide to:

_____ Extend prescription for the same skill.

_____ Assign a second CET for the same skill.

_____ Assign entire CET for Skill ___.

_____ Assign Part II of CET for Skill ___.

X Write initial prescription for Skill 3.

Why? Part II of CET and Joe's Pretest score (Skill 3) of 40% indicates that he still needs instruction in Skill 3.

CET I

CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 7]	[✓ 100%]
	NO. OF PTS.	%
	6	86
	5	71
	4	57
	3	43
	2	29
	1	14

Draw a line to match each sentence with the word that fits.

One-third means one of
_____ equal parts.

One-half means one of
_____ equal parts.

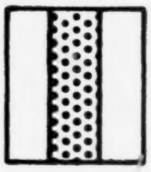
One-fourth means one of
_____ equal parts.

two

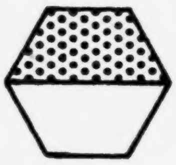
four

three

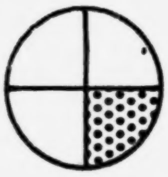
Circle the fraction that tells how much is shaded.



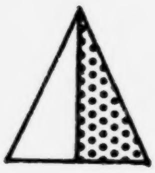
$\frac{1}{2}$ $\frac{1}{4}$ [✓ $\frac{1}{3}$]



[✓ $\frac{1}{2}$] $\frac{1}{4}$ $\frac{1}{3}$

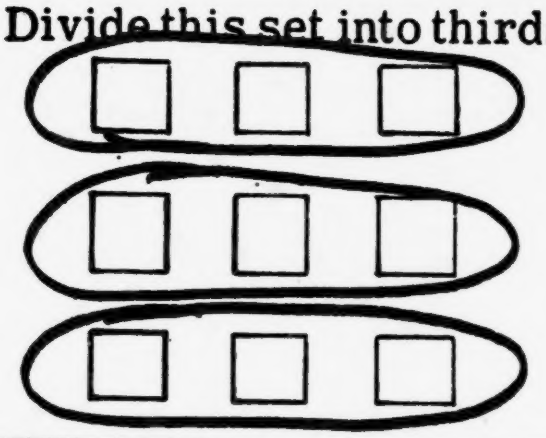


$\frac{1}{2}$ [✓ $\frac{1}{4}$] $\frac{1}{3}$

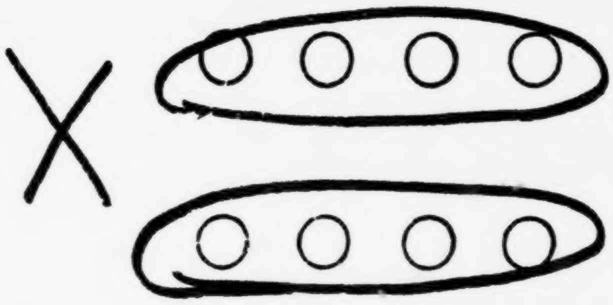


[✓ $\frac{1}{2}$] $\frac{1}{4}$ $\frac{1}{3}$

Divide this set into thirds.



Divide this set into fourths.



CIRCLE CORRECT BOX	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	[✓ 1]	[✓ 50]

This is a copy of the STS booklet for Skill 3.

You examine all the skill sheets and STS sheets (pp. 20-21) in the booklet to become familiar with materials for this skill.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 3, in particular) and Part II of the CET for Skill 2, you decide to prescribe the following on 2/5:

Page		Reason
Read Student Page		Introduces skill; previews work.
23 R	*09	Discriminates among sets divided into 1/4's.
23 R	09	Divides regularly arranged sets into 1/4's.
4		Divides sets into 1/4's.
6	*02	Divides sets into 1/3's.
8	02	Divides sets into 1/2, 1/3, 1/4.

*09 (records) tells Joe that he will be using a disc page marked 23R.

*02 (peer tutor) tells Joe that Mark will help him with these pages.

You estimate the time needed as: 2 class periods

After you recheck these five pages and the two disc scripts, you record the page numbers and the date on lines 12-17 of Joe's Prescription Sheet.

SCHOOL CODE

NAME ____________________

NUMBER ____________ CLASS ____________

ipi

individually prescribed instruction

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

FRACTIONS (08)

SKILL 3

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

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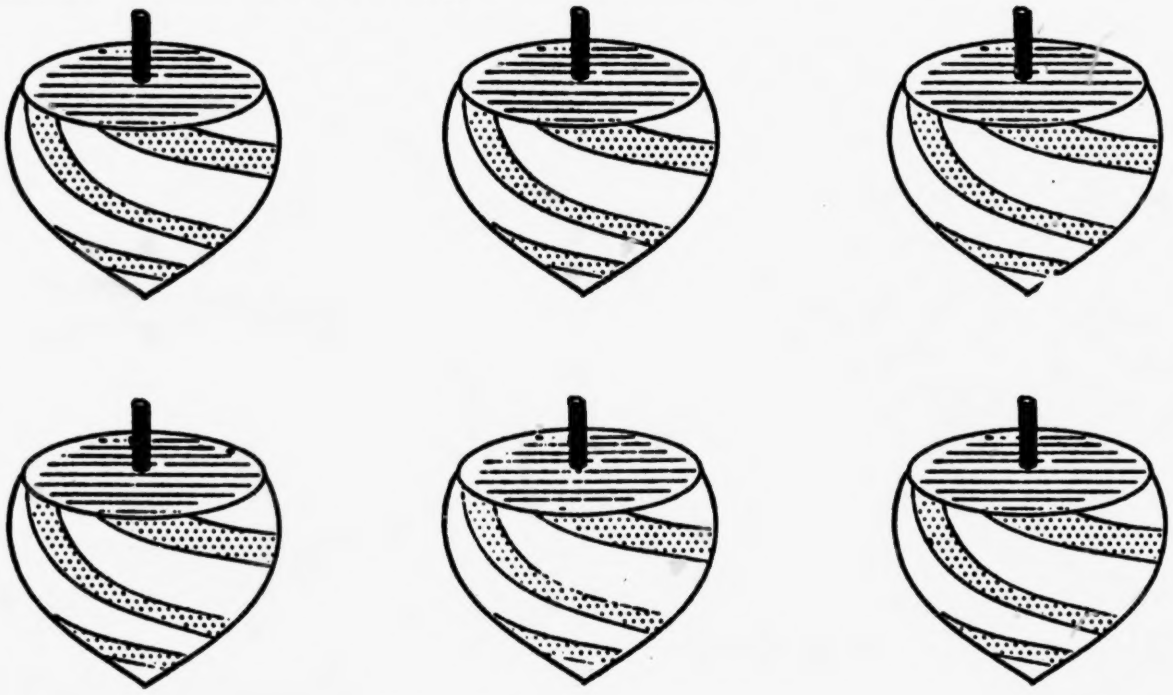
DEVELOPMENTAL EDITION

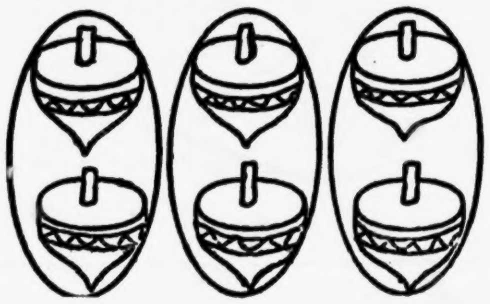
TO THE STUDENT

Can you divide this set of tops into thirds?



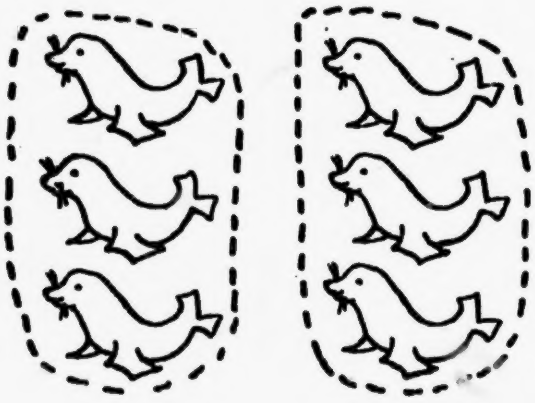
You will learn how in this booklet.

Answer

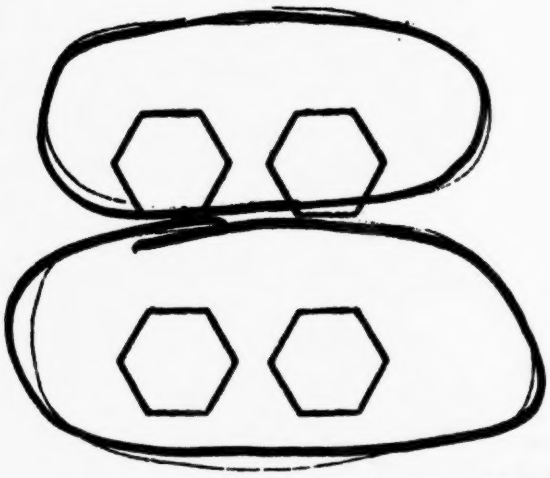


1

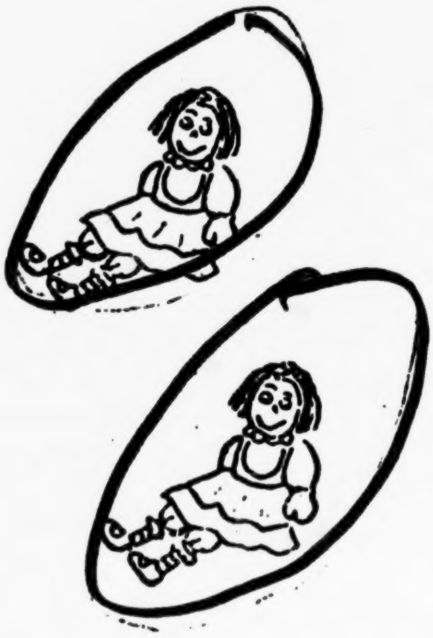
Count the objects in each set. Now divide the sets into two parts equal in number. Each part is called one-half. Draw a ring around each half of the sets below.

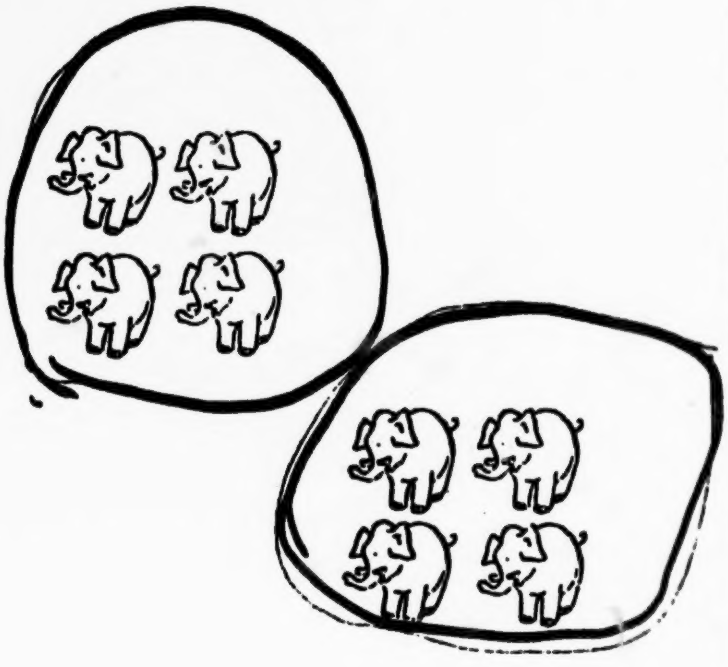


one-half one-half

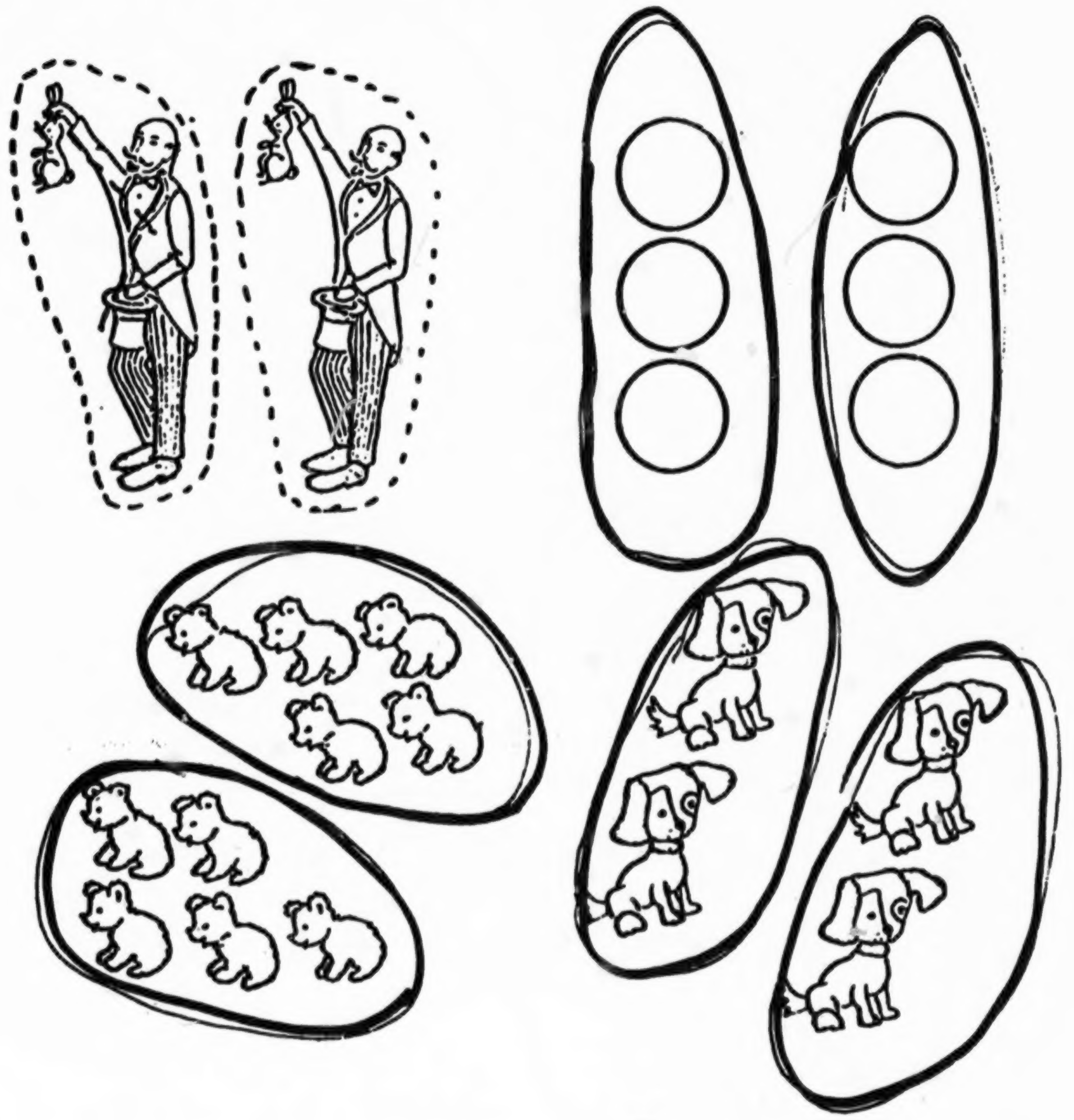


Scoring note:
Accept any correct circling.





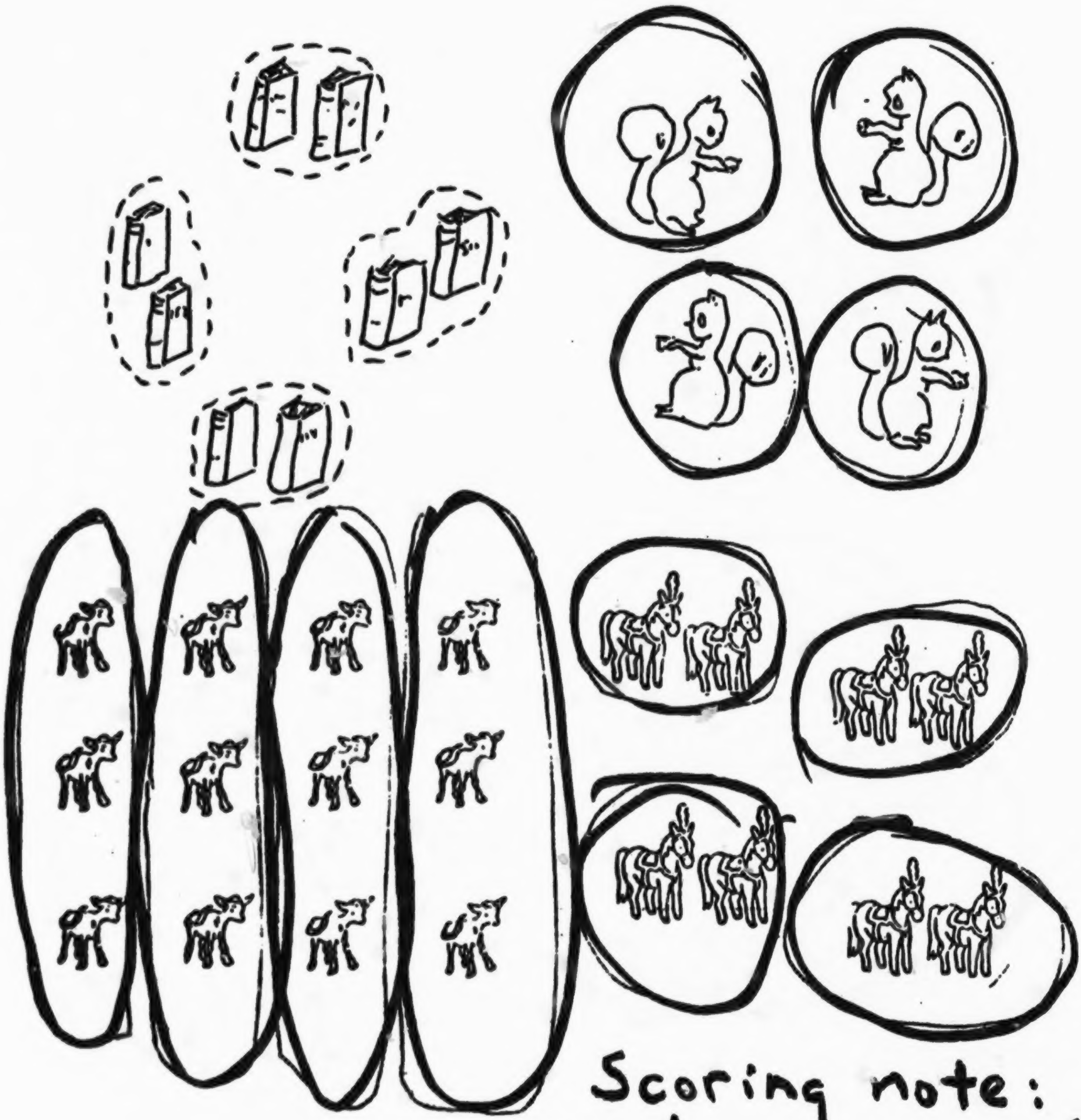
When you divide a set into two parts equal in number, each part is called one-half. Draw a ring around each half of the sets below.



Scoring note: Accept any correct circling.

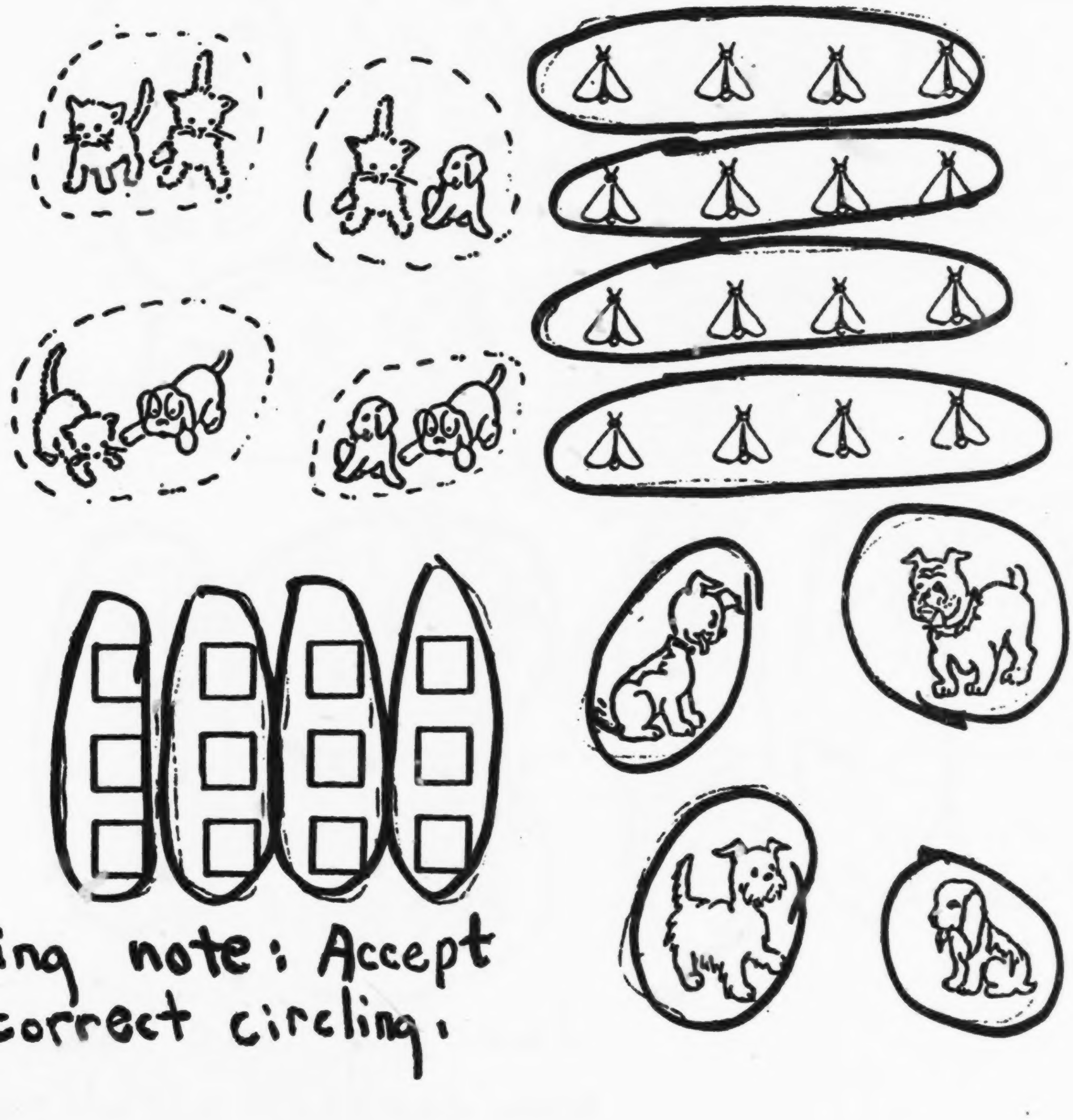
For extra practice, do Page 15.

Count the objects in each set. Now divide each set into four parts equal in number. Each part is called one-fourth. Draw a ring around each fourth.



Scoring note:
Accept any correct circling

When you divide a set into four parts equal in number, each part is called one-fourth. Draw a ring around each fourth of the sets below.

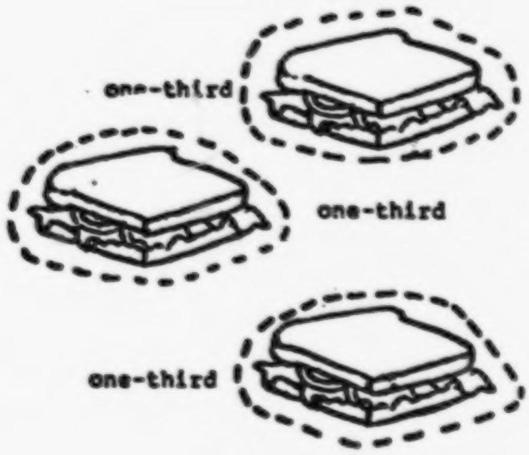


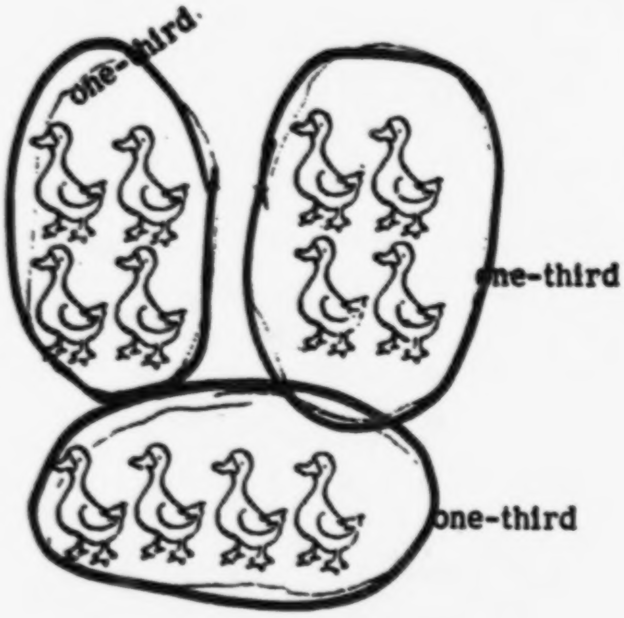
Scoring note: Accept any correct circling.

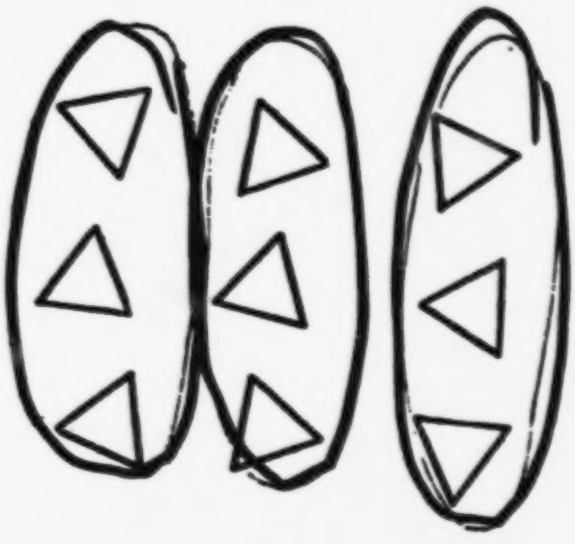
For extra practice, do Page 16.

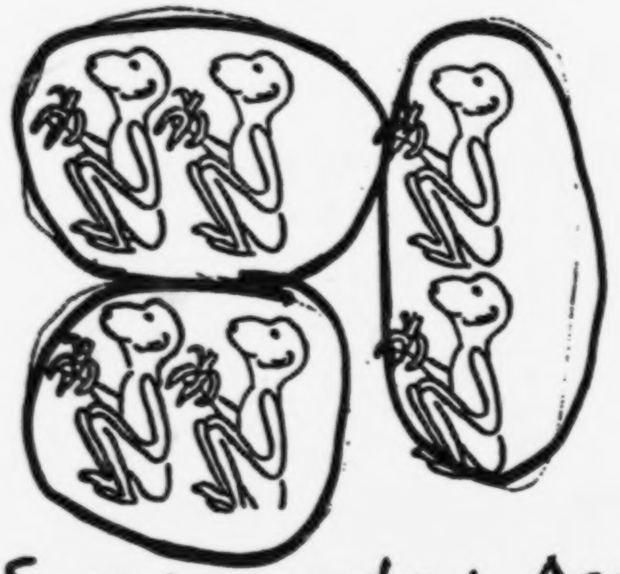
5.

Count the objects in each set. Now divide each set into three parts equal in number. Each part is called one-third. Draw a ring around each third.



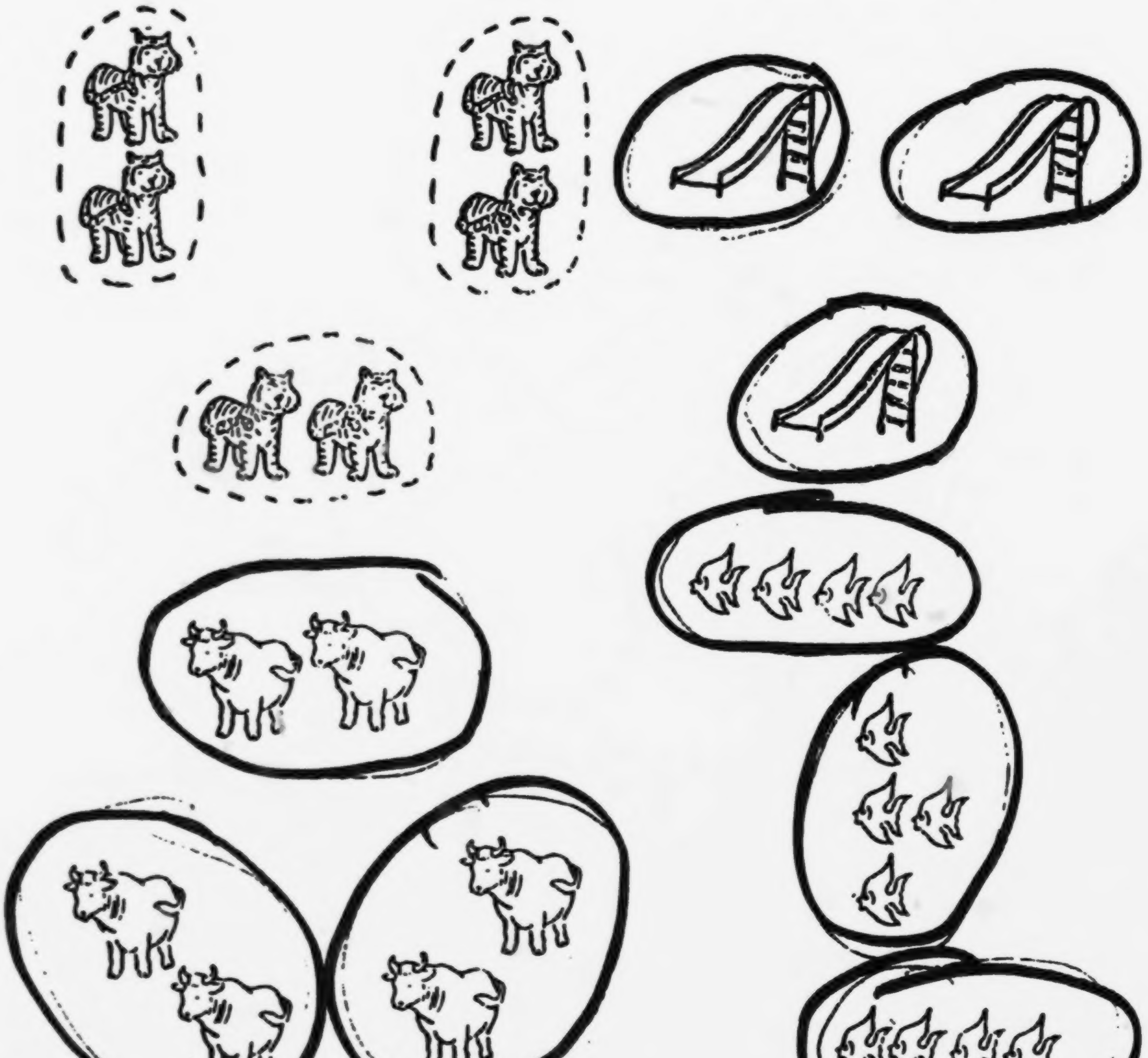






Scoring note: Accept any correct circling.

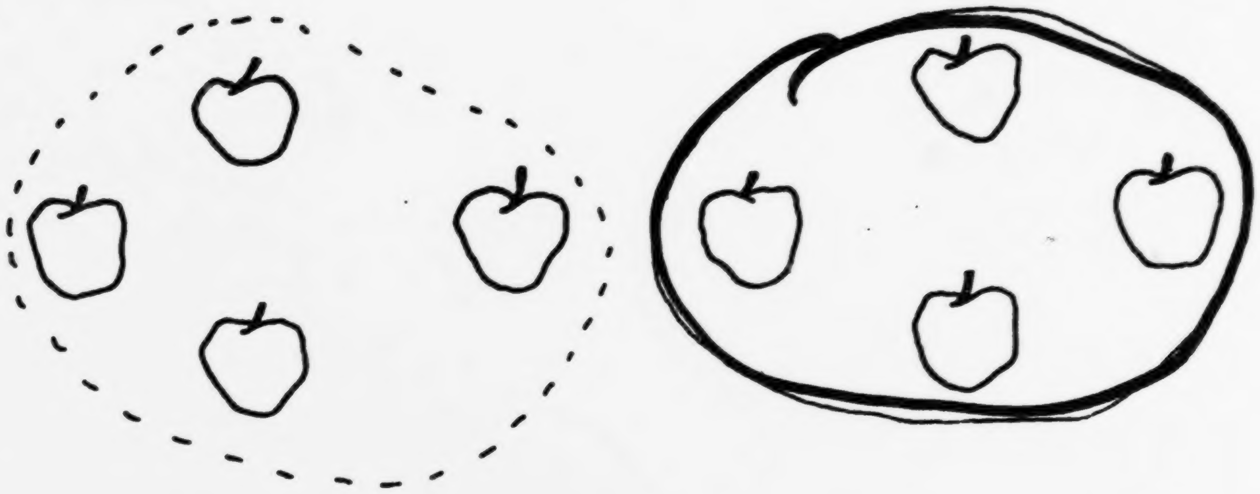
When you divide a set into three parts equal in number, each part is called one-third. Draw a ring around each third of the sets below.



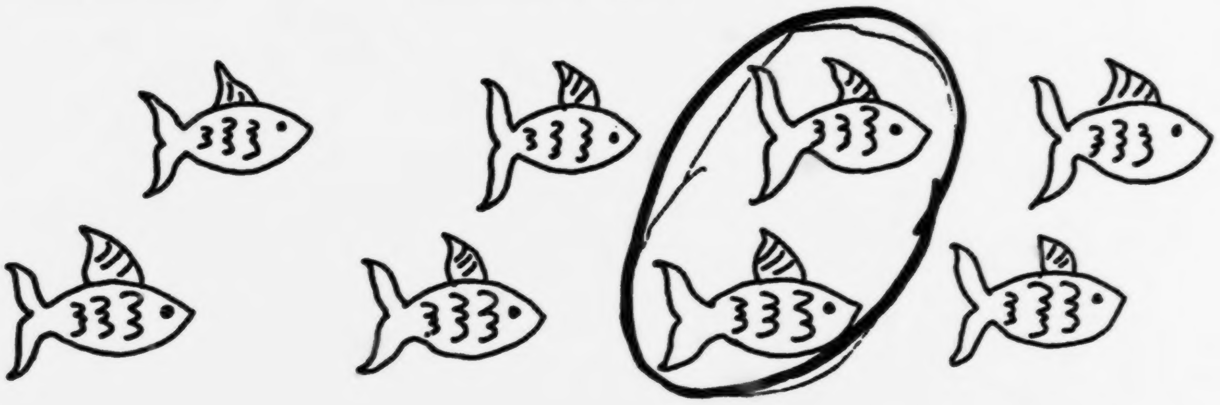
Scoring note: Accept any correct circling.

For extra practice, do Page 17.

When you circle one-half of a set, you circle one of two parts equal in number. Circle one-half of this set.

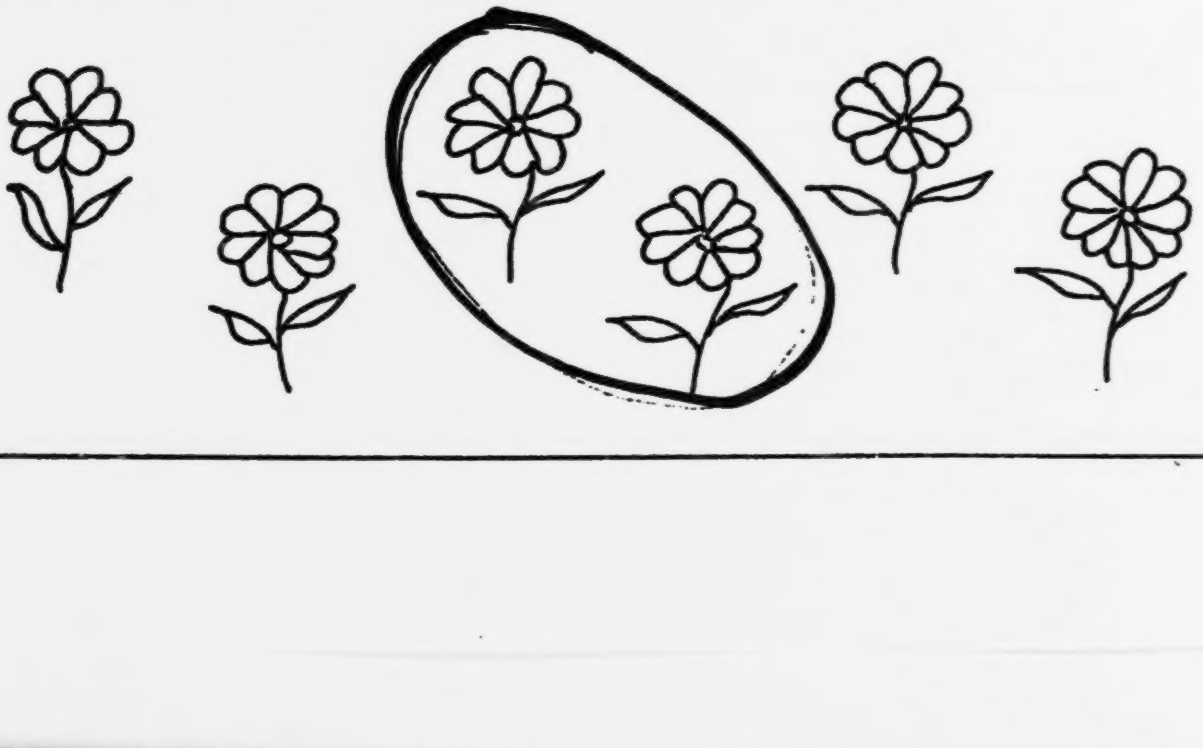


When you circle one-fourth of a set, you circle one of four parts equal in number. Circle one-fourth of this set.



Scoring note: Accept any correct circling.

When you circle one-third of a set, you circle one of three parts equal in number. Circle one-third of this set.



Draw a ring around one-half ($\frac{1}{2}$) of the set.

[✓ □ □ □] □ □ □

Draw a ring around one-third ($\frac{1}{3}$) of the set.

△ △ [✓ △]

Draw a ring around one-fourth ($\frac{1}{4}$) of the set.

[✓ ○ ○] ○ ○ ○ ○ ○ ○

Draw a ring around one-third ($\frac{1}{3}$) of the set.

[✓ △ △] △ △ △ △

Draw a circle around one-fourth ($\frac{1}{4}$) of the set.

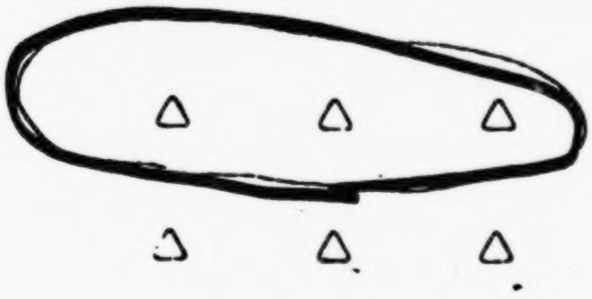
□ [✓ □] □ □

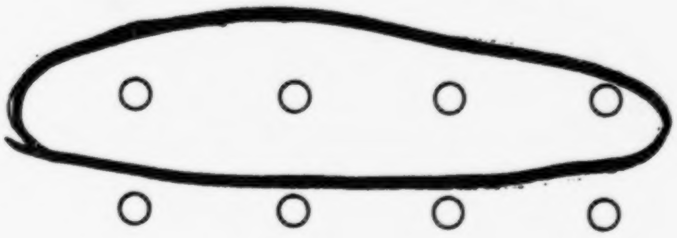
Scoring note: Accept any correct circling.

Draw a circle around one-half ($\frac{1}{2}$) of the set.

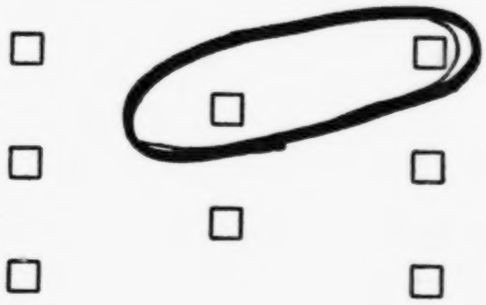
[✓ ○ ○ ○] ○ ○ ○

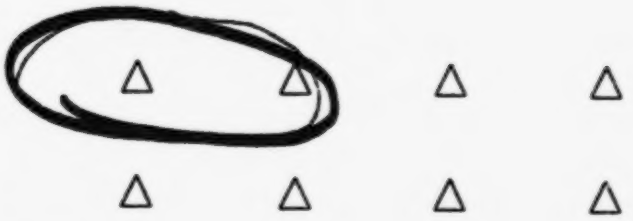
Draw a ring around one-half $(\frac{1}{2})$ of each set.



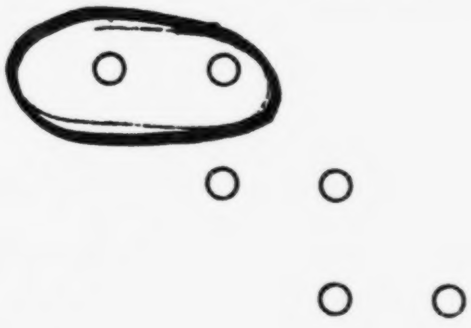


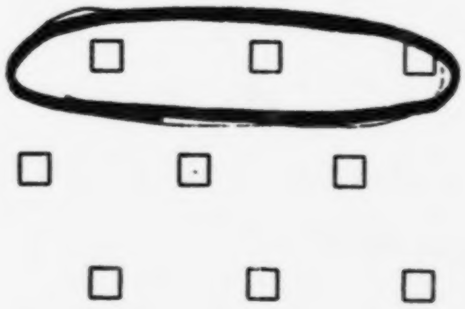
Draw a ring around one-fourth $(\frac{1}{4})$ of each set.





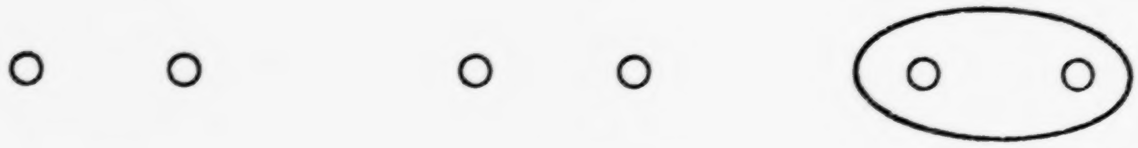
Draw a ring around one-third $(\frac{1}{3})$ of each set.



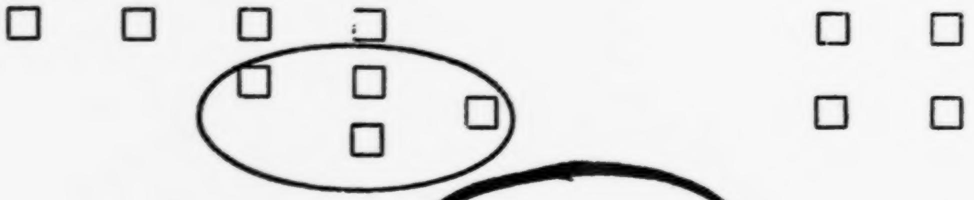


Scoring note: Accept any correct circling

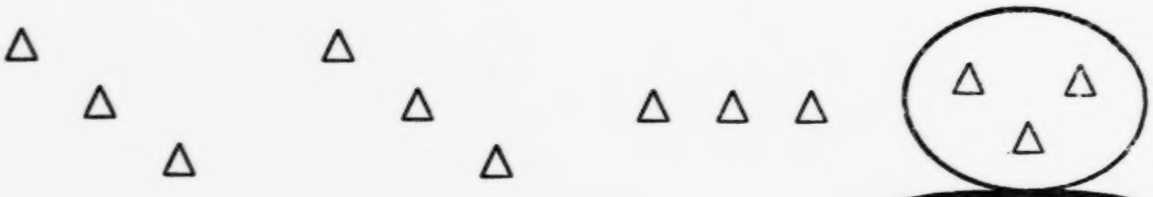
Each set below is divided to show one-half, one-third, or one-fourth. Circle the answer which describes each set.



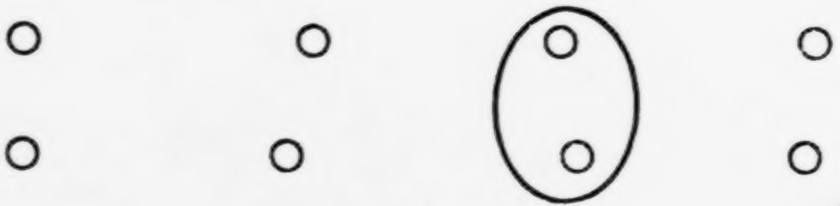
one-half [✓ one-third] one-fourth



one-half [✓ one-third] one-fourth



one-half one-third [✓ one-fourth]

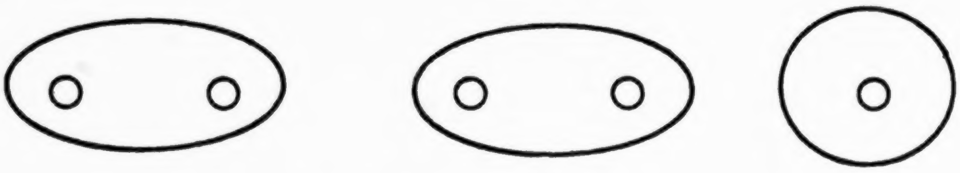


one-half one-third [✓ one-fourth]

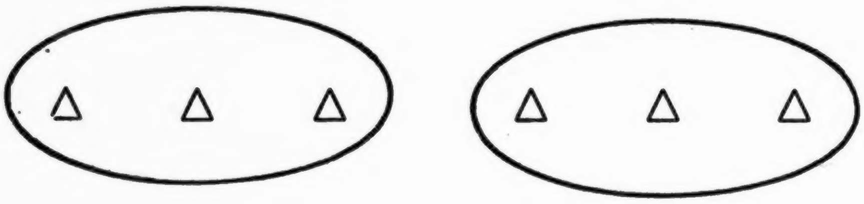
Scoring note: Accept any correct circling.

For extra practice, do Page 18.

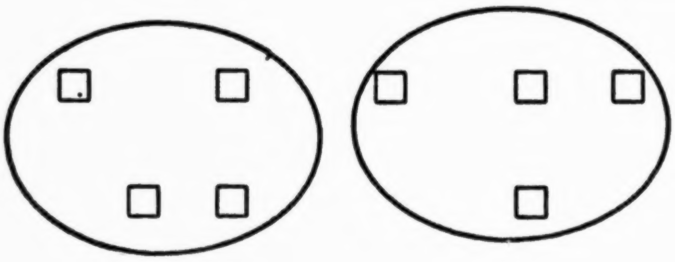
One-half means one of two parts equal in number. Is each set divided into halves? Circle yes or no.



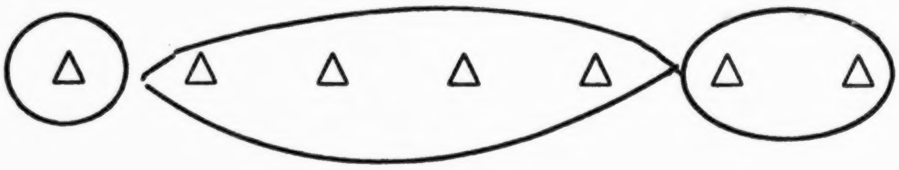
yes [✓ no]



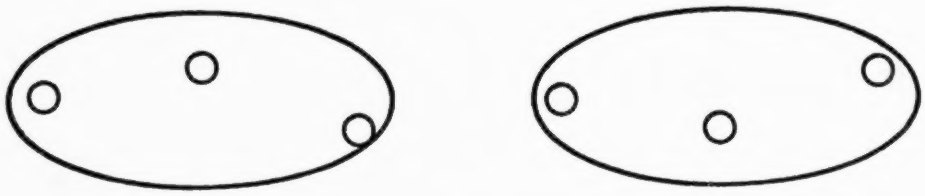
[✓ yes] no



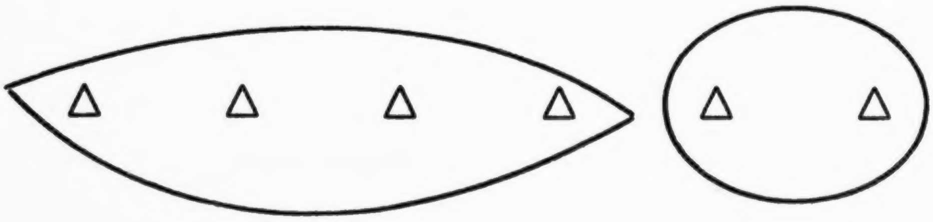
[✓ yes] no



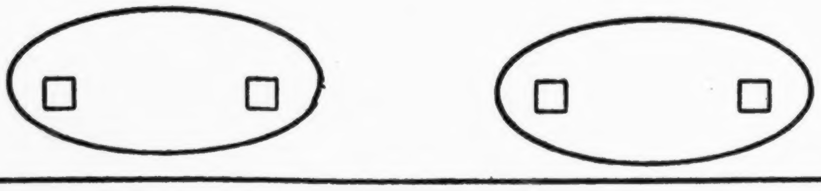
yes [✓ no]



[✓ yes] no

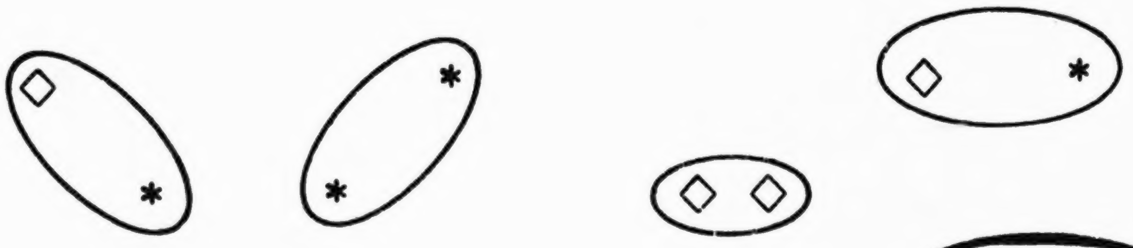


yes [✓ no]

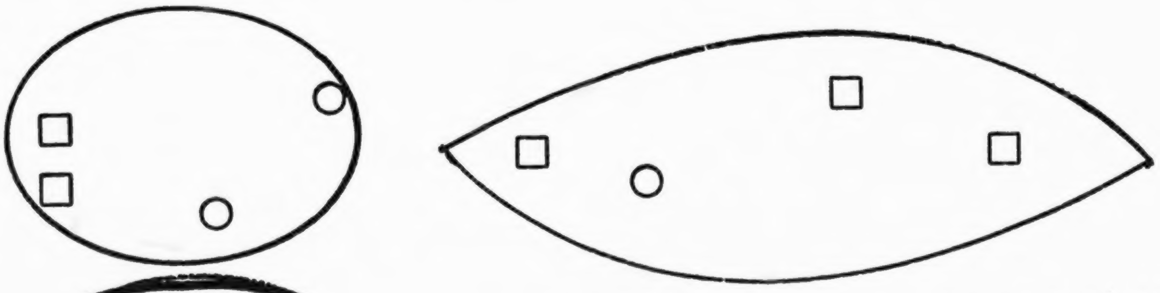


[✓ yes] no

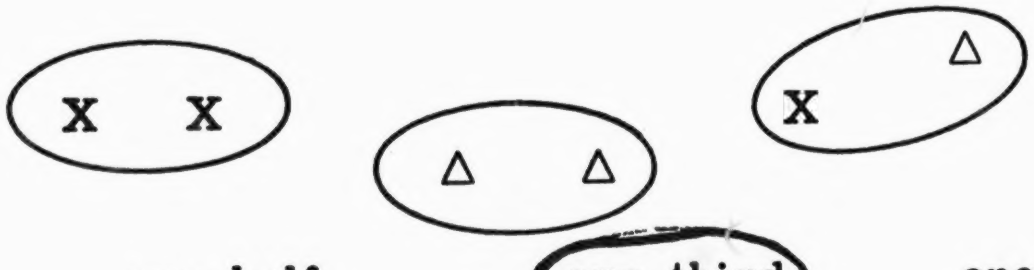
Each set is divided to show one-half, one-third or one-fourth. Circle the answer which describes each set. Remember to count the objects.



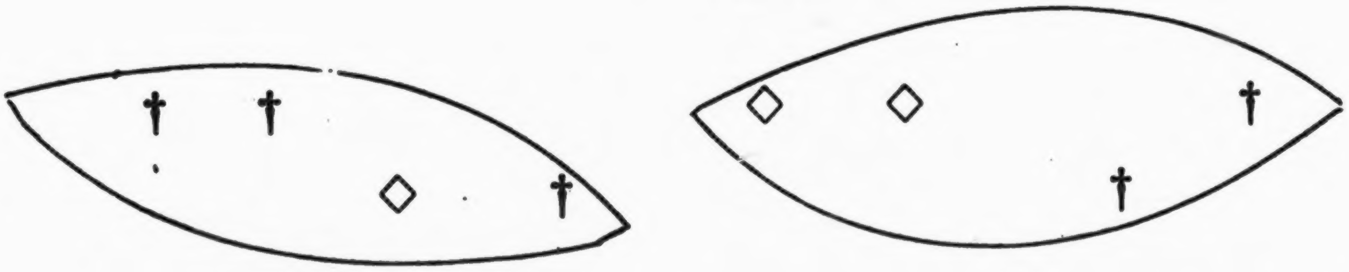
one-half one-third [✓ one-fourth]



[✓ one-half] one-third one-fourth



one-half [✓ one-third] one-fourth



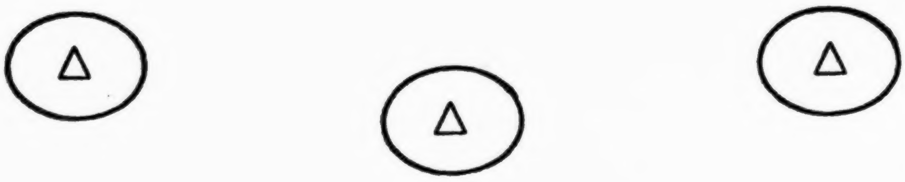
[✓ one-half] one-third one-fourth

Circle yes or no.

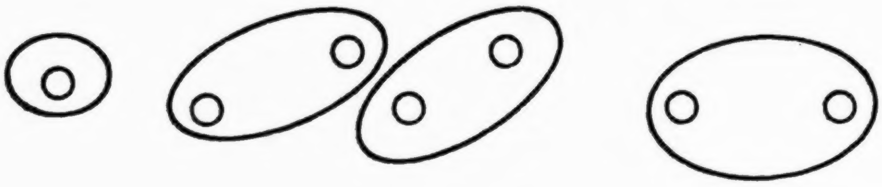
Is each set divided into thirds?

You should have three parts equal in number.

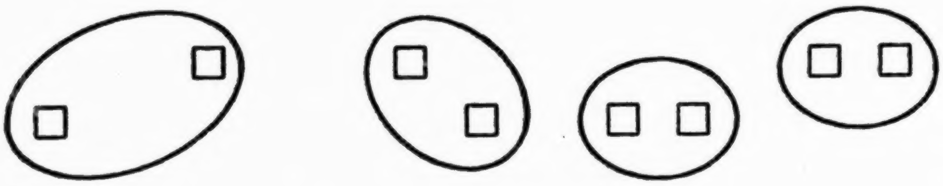
Remember to count the objects.



[✓ yes] no

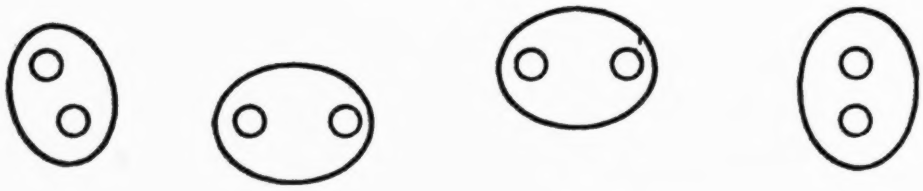


yes [✓ no]

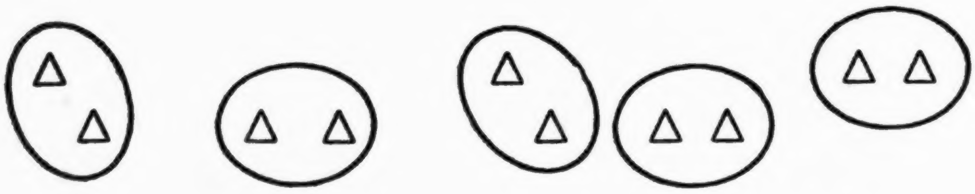


yes [✓ no]

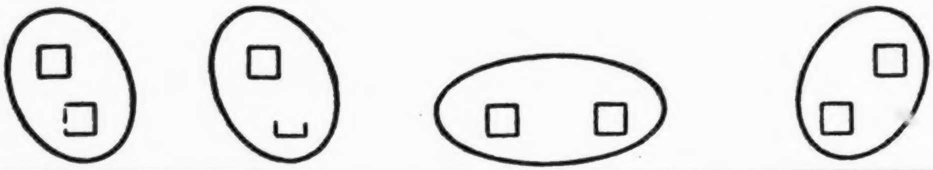
Are these sets divided into fourths? There should be four parts equal in number.



[✓ yes] no



yes [✓ no]

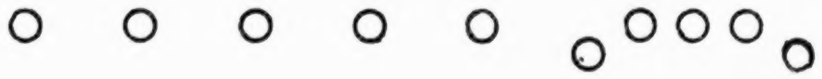


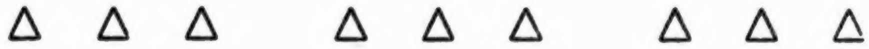
[✓ yes] no

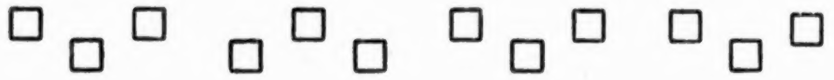
100

CET I

Divide each set according to the word on the left.

halves 

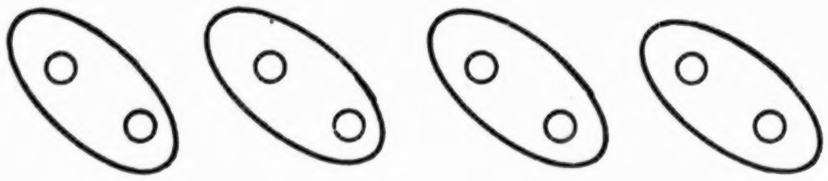
thirds 

fourths 

CIRCLE CORRECT BOX

TL. PTS.	
6	100%
NO. OF PTS.	%
5	83
4	67
3	50
2	33
1	17

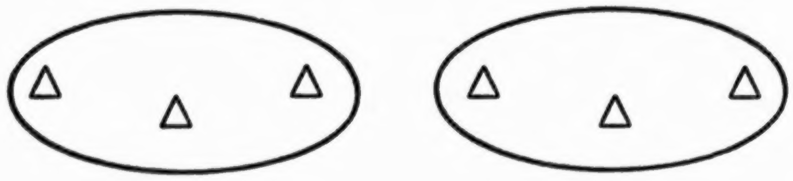
Circle the word that tells how each set is divided.



halves

fourths

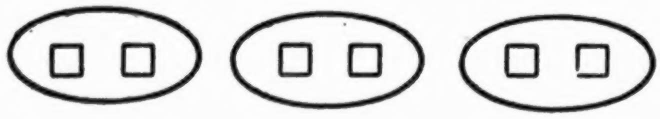
thirds



halves

fourths

thirds

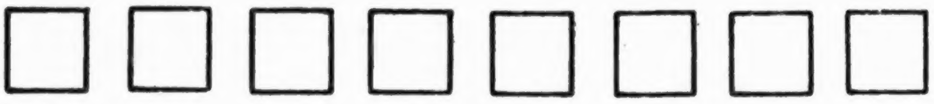


halves

fourths

thirds

Divide this set into four equal parts.

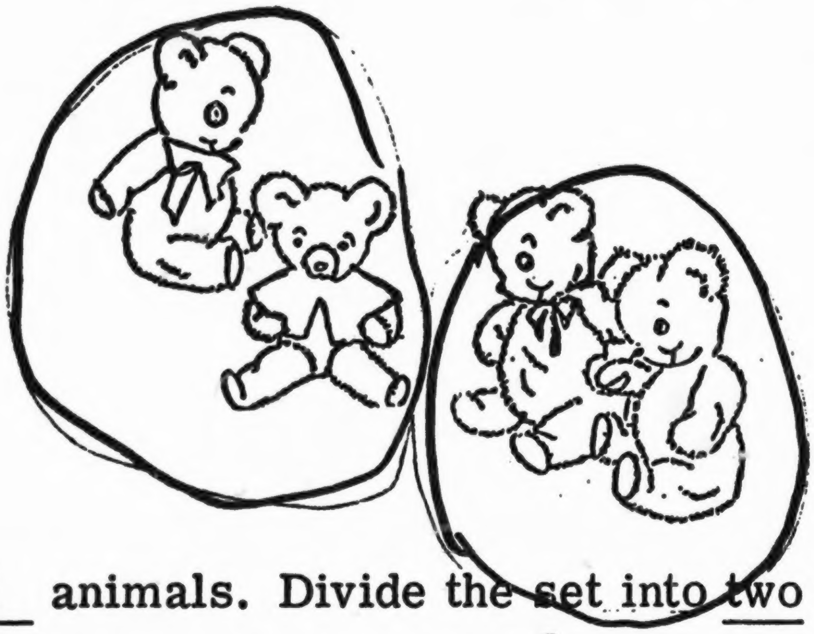


Each part is _____ of the whole set.

CIRCLE CORRECT BOX

TL. PTS.	
2	100%
NO. OF PTS.	%
1	50

Count the animals in this set.

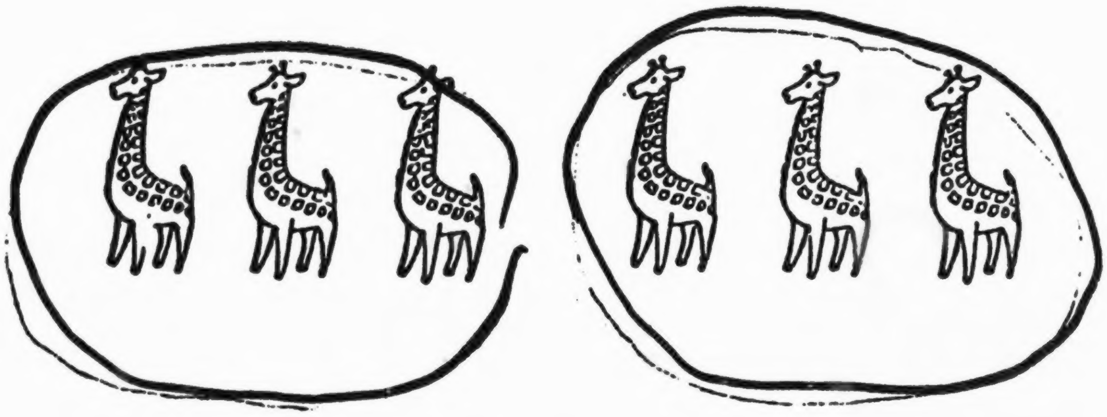


There are 4 animals. Divide the set into two parts of equal number. Each part is called one-half .

alf

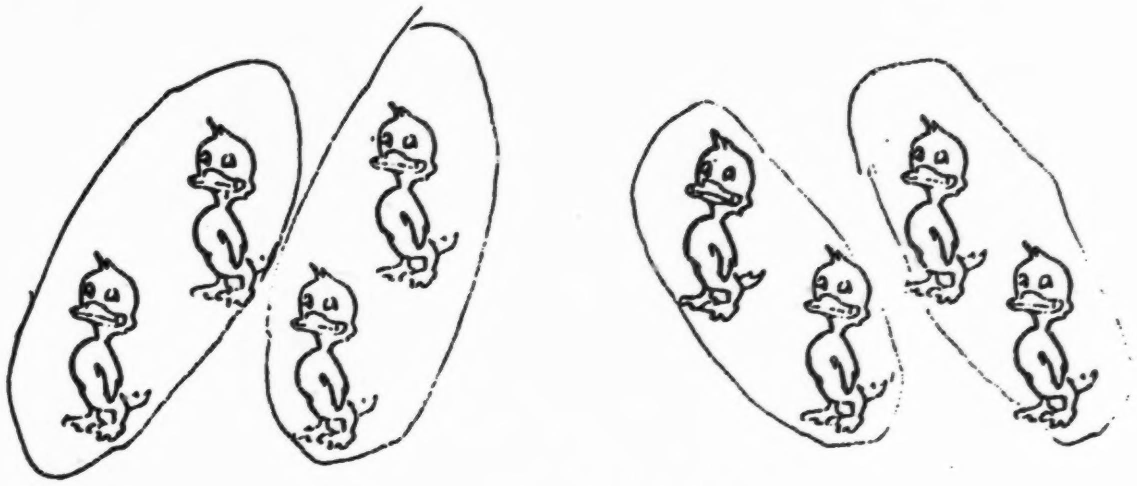
Count the animals in this set.

Scoring note: Accept any correct circling.



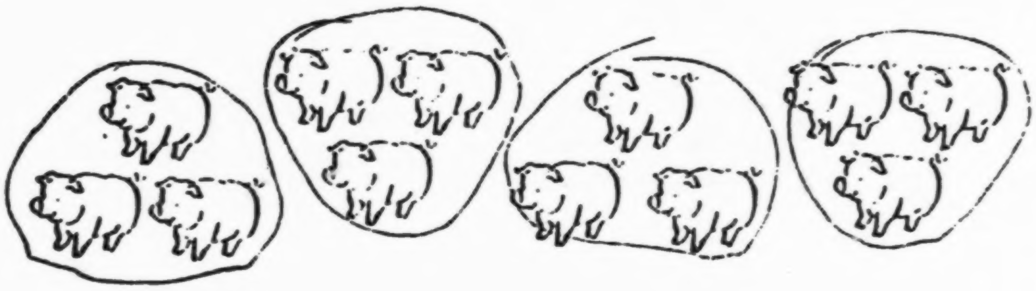
There are 6 animals. Divide the set into two parts of equal number. Each part is called one-half .

Count the animals in this set.



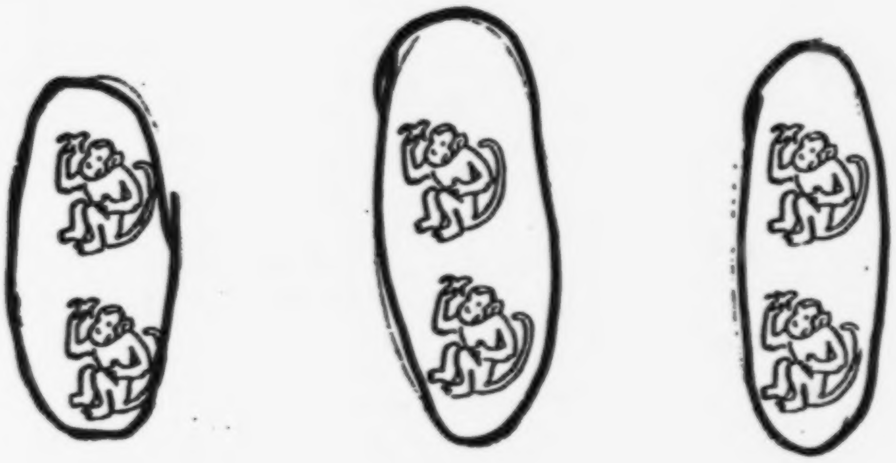
There are 8 animals. Divide the set into four parts of equal number. Each part has 2 animals. Each part is called one-fourth.

Count the animals in this set. Scoring note: Accept any correct circling.



There are 12 animals. Divide the set into four parts of equal number. Each part has 3 animals. Each part is called one-fourth

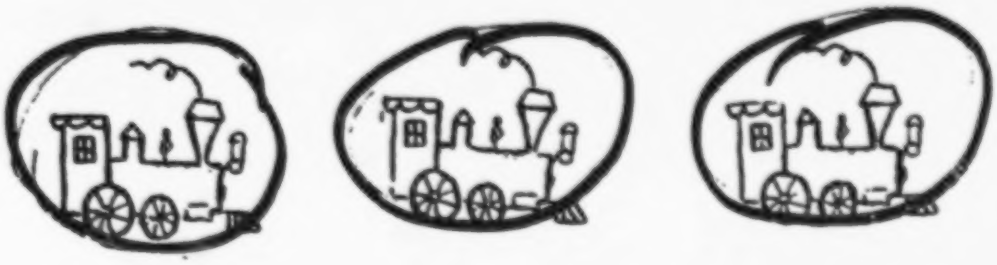
Count the animals in this set.



There are 6 animals. Divide the set into three parts of equal number. Each part has 2 animals. Each part is called one-third.

Scoring note: Accept any correct circling.

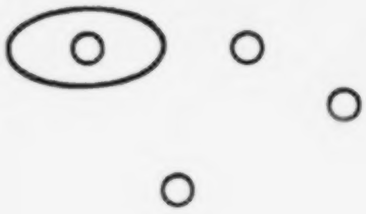
Count the objects in this set.



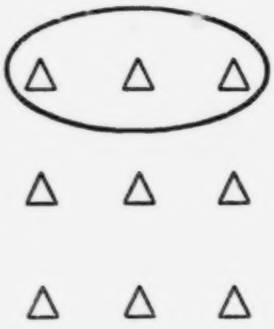
There are 3 objects. Divide the set into three parts of equal number. Each part has 1 object. Each part is called one-third.

Draw a ring around the fraction that tells what part of the picture is circled.

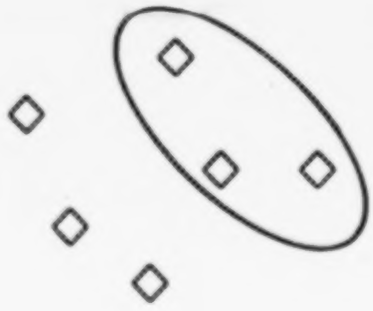
Remember that one-half is one of 2 parts of equal number.
one-fourth is one of 4 parts of equal number.
one-third is one of 3 parts of equal number.



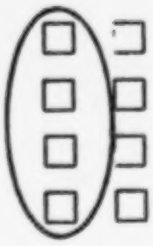
one-half
one-third
[✓ one-fourth]



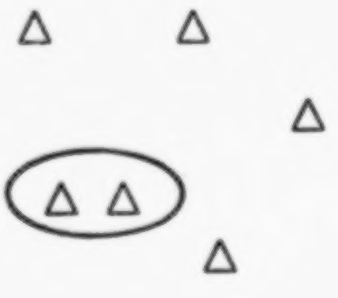
one-half
[✓ one-third]
one-fourth



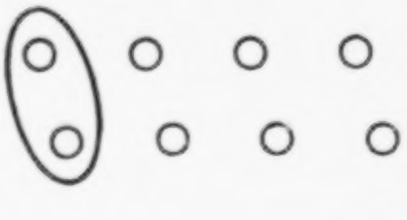
[✓ one-half]
one-third
one-fourth



[✓ one-half]
one-third
one-fourth



one-half
[✓ one-third]
one-fourth

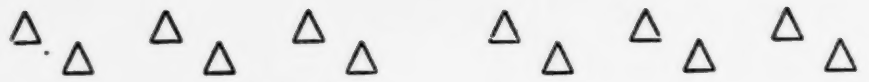


one-half
one-third
[✓ one-fourth]

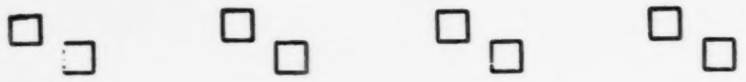
CET II

Divide each set as the word tells you.

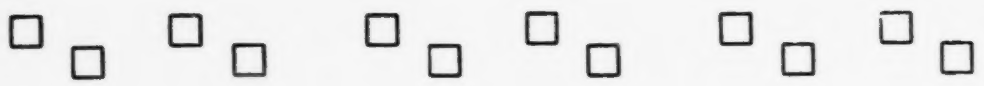
halves



fourths



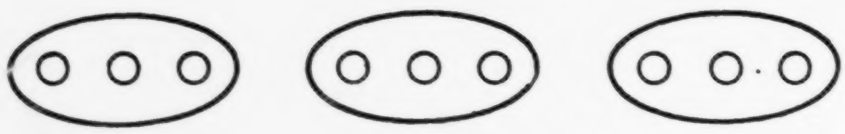
thirds



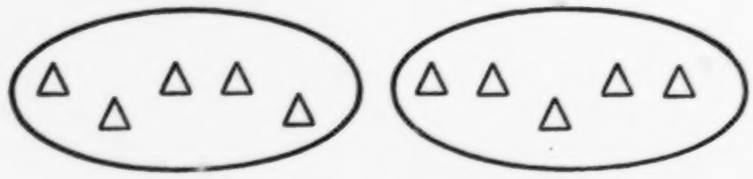
CIRCLE CORRECT BOX

TL. PTS.	
6	100%
NO. OF PTS.	%
5	83
4	67
3	50
2	33
1	17

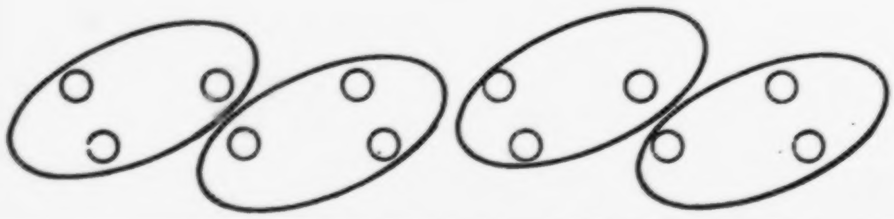
Circle the word that tells how each set is divided.



halves
thirds
fourths

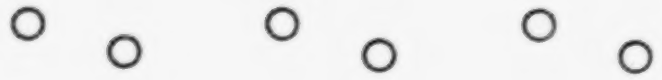


halves
thirds
fourths



halves
thirds
fourths

Divide the set into three equal parts.



Each part is _____ of the whole set.

CIRCLE CORRECT BOX

TL. PTS.	
2	100%
NO. OF PTS.	%
1	50

Page 20

LEVEL C, FRACTIONS, SKILL 3

OBJECTIVE: Divides a set of objects into halves, thirds, or fourths, or identifies a set of objects divided into halves, thirds, or fourths.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Divides set into halves.	
2.	Divides set into halves.	15
3.	Divides set into fourths.	
4.	Divides set into fourths.	16
5.	Divides set into thirds.	
6.	Divides set into thirds.	17
7.	Circles fraction of set.	
8.	Circles fraction of set.	
9.	Circles fraction of set.	
10.	Selects fraction which describes circled part of set.	18
11.	Indicates whether set is divided into halves.	
12.	Selects fraction which describes circled part of set. (one-fourth)	
13.	Indicates whether set is divided into thirds and fourths.	
14.	CET I.	
	CET II.	19

Circle pages that are to be done.

Standard Teaching Sequence, Con't

1967 - 68

Sequence No.	Prescription No.	
20R		Identifies sets which have been divided into halves. Divides sets into halves.
21R		Identifies sets which have been divided into thirds. Divides sets into thirds.
22R		Examines sets which have been divided into parts to determine which are divided into fourths and which are not.
23R		Divides sets into fourths. Sets contain 8 to 20 objects regularly arranged.

Teaching Aids:

Milton Bradley Fractional Parts on a Board
Creative Playthings Simple Fractions
Ideal Fractions Made Easy

These are the five skill sheets completed by Joe and corrected by the Aide.

You study the scores and look at Joe's work on the skill sheets:

Joe can: Discriminate between and divide sets into 1/4's, 1/3's and 1/2's.

Joe cannot: - - -

You describe how Joe worked with this prescription: Joe worked well independently; he and Mark took a longer time for the peer tutoring than had been expected, but they were very intent on their work and Joe benefited from this setting.

Based on your analysis of Joe's work, you decide to:

_____ Revise original prescription

_____ Extend prescription

X Assign a CET for Skill 3

Why? Joe's performance on the skill sheets indicates mastery of Skill 3.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 3, in particular) and on the skill sheets for this skill, you decide to prescribe the following on 2/10:

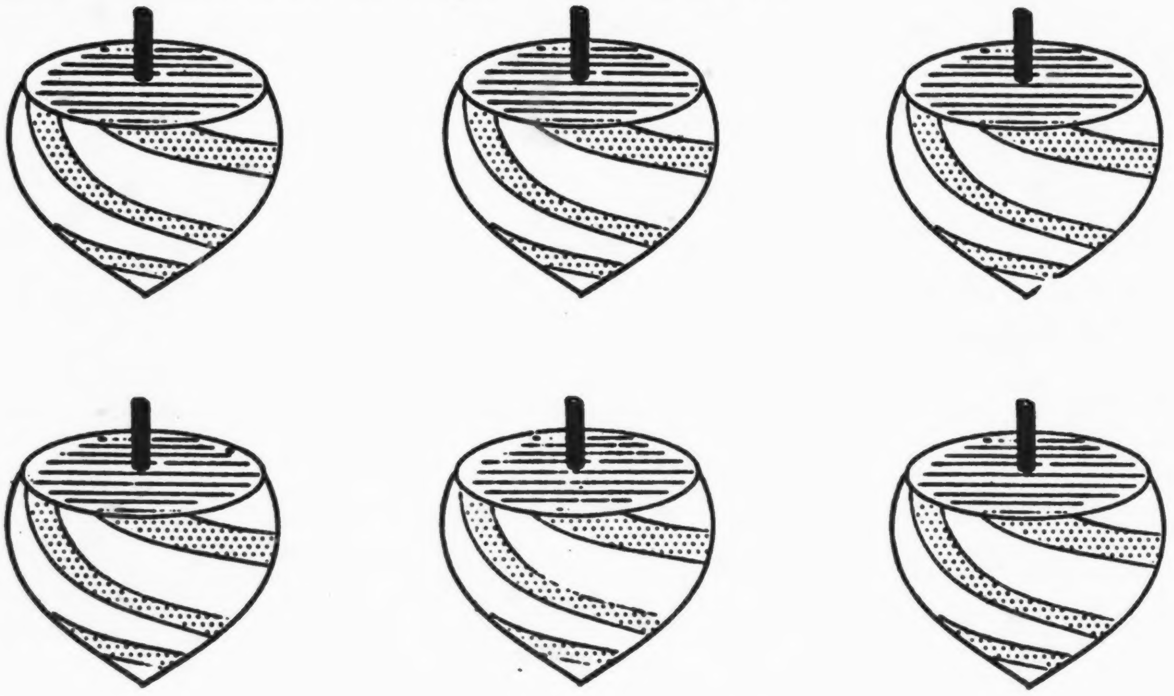
Page	Reason
14	CET to test mastery of Skill 3.

You estimate the time needed as: 20 minutes maximum.

After you recheck this CET, you record the page number and the date on line 18 of Joe's Prescription Sheet.

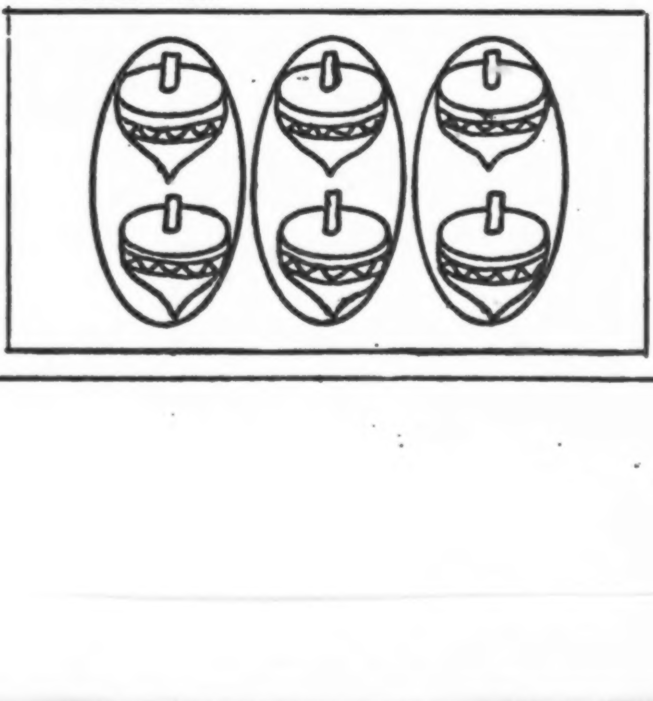
TO THE STUDENT

Can you divide this set of tops into thirds?



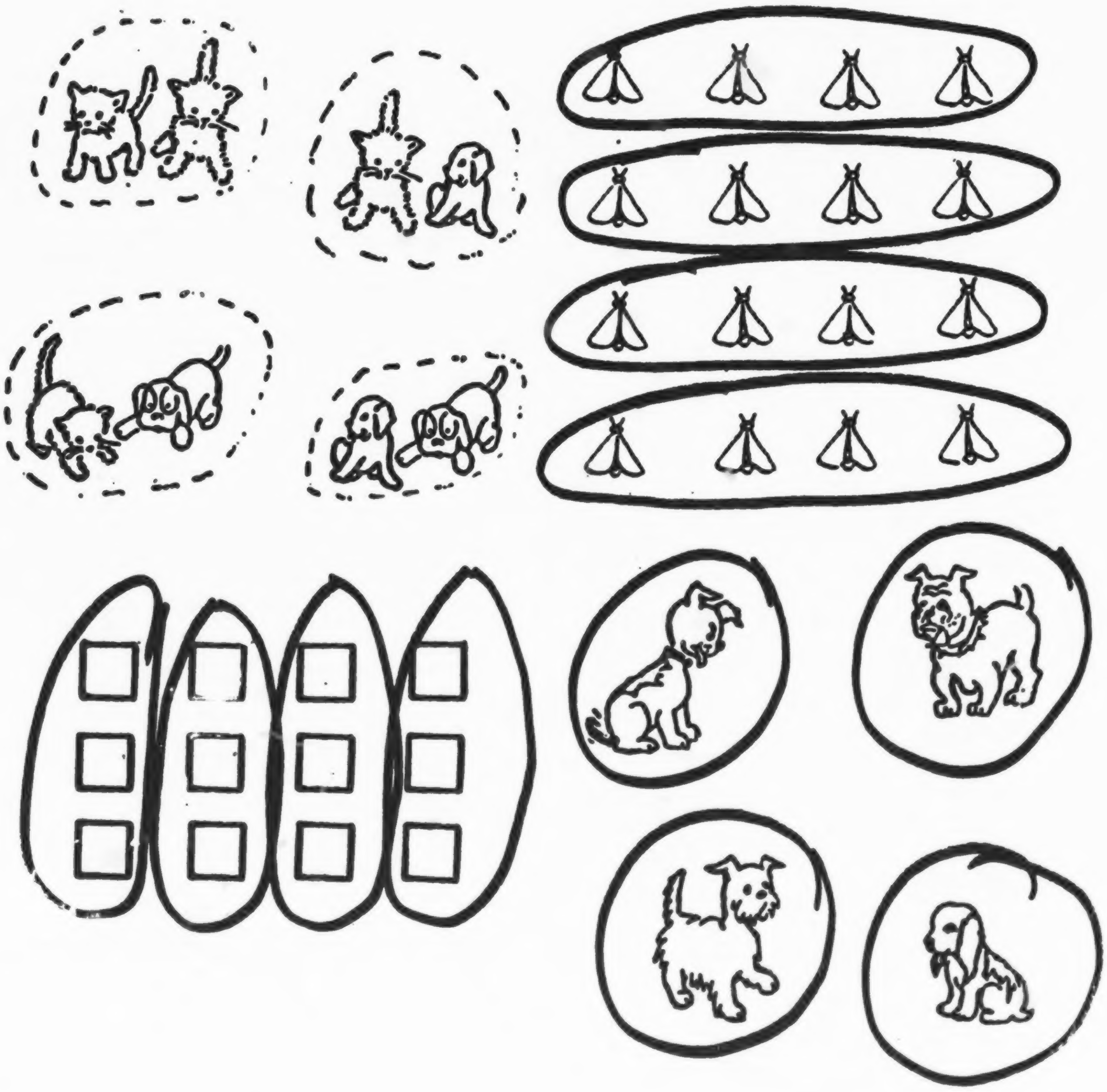
You will learn how in this booklet.

Answer



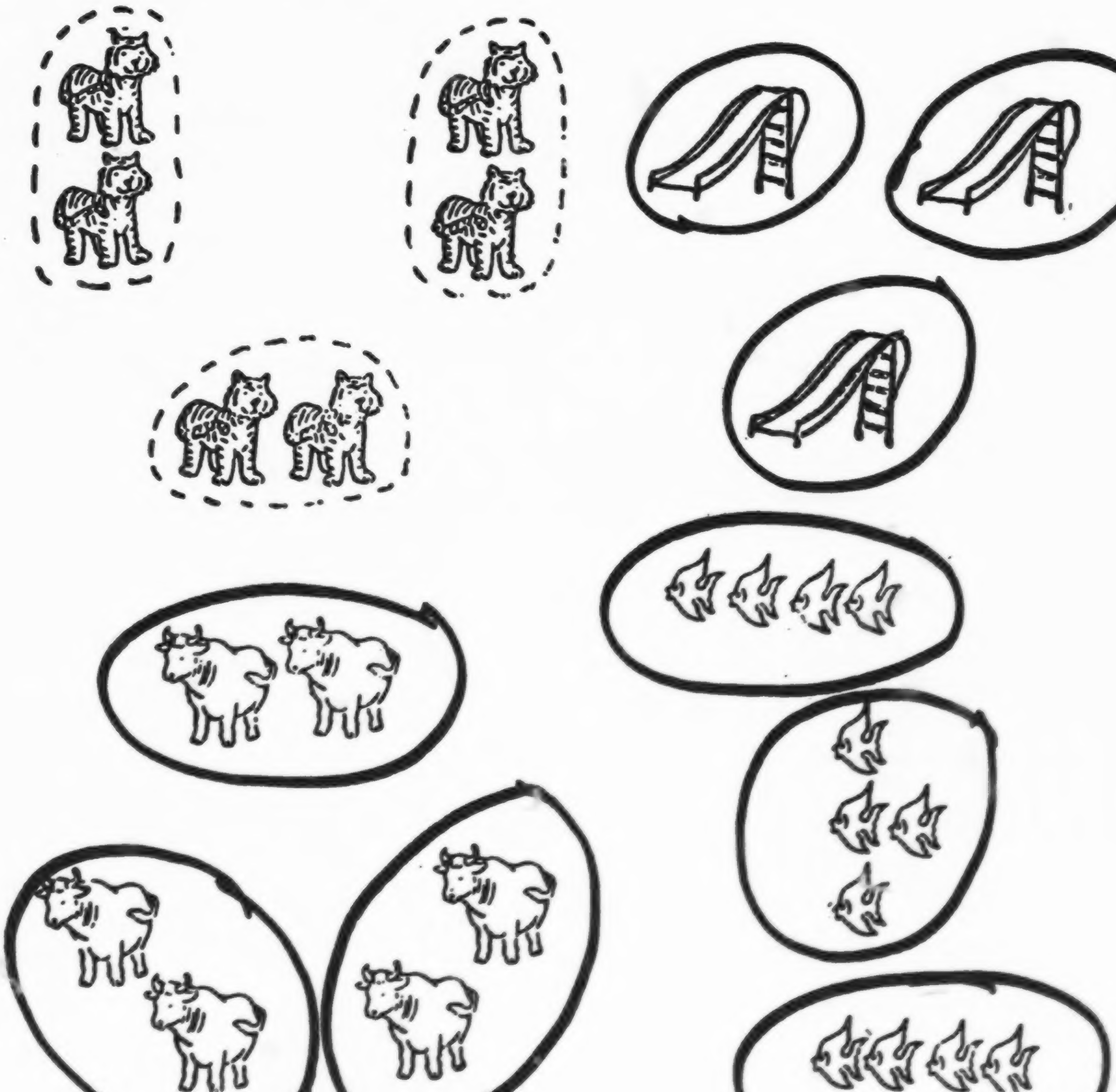
4

When you divide a set into four parts equal in number, each part is called one-fourth. Draw a ring around each fourth of the sets below.



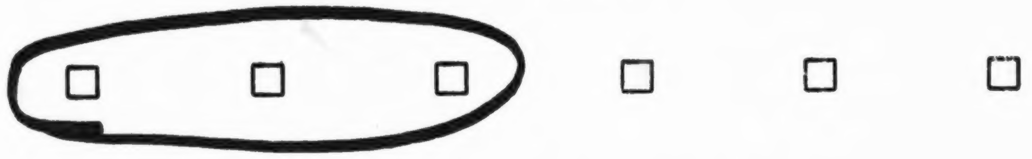
For extra practice, do Page 16.

When you divide a set into three parts equal in number, each part is called one-third. Draw a ring around each third of the sets below.

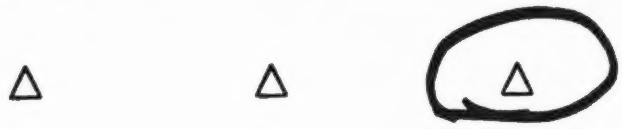


For extra practice, do Page 17.

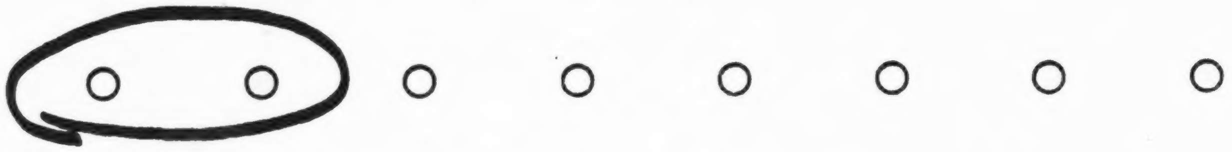
Draw a ring around one-half ($\frac{1}{2}$) of the set.



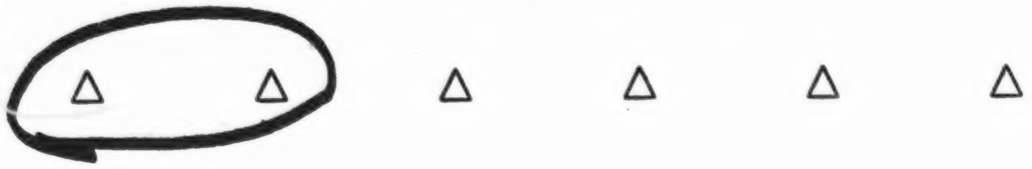
Draw a ring around one-third ($\frac{1}{3}$) of the set.



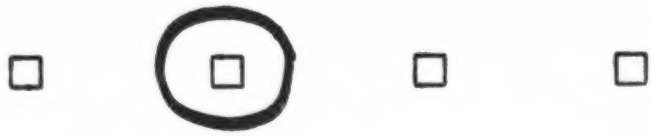
Draw a ring around one-fourth ($\frac{1}{4}$) of the set.



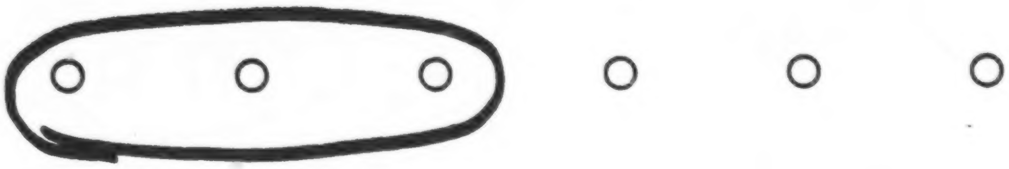
Draw a ring around one-third ($\frac{1}{3}$) of the set.



Draw a circle around one-fourth ($\frac{1}{4}$) of the set.

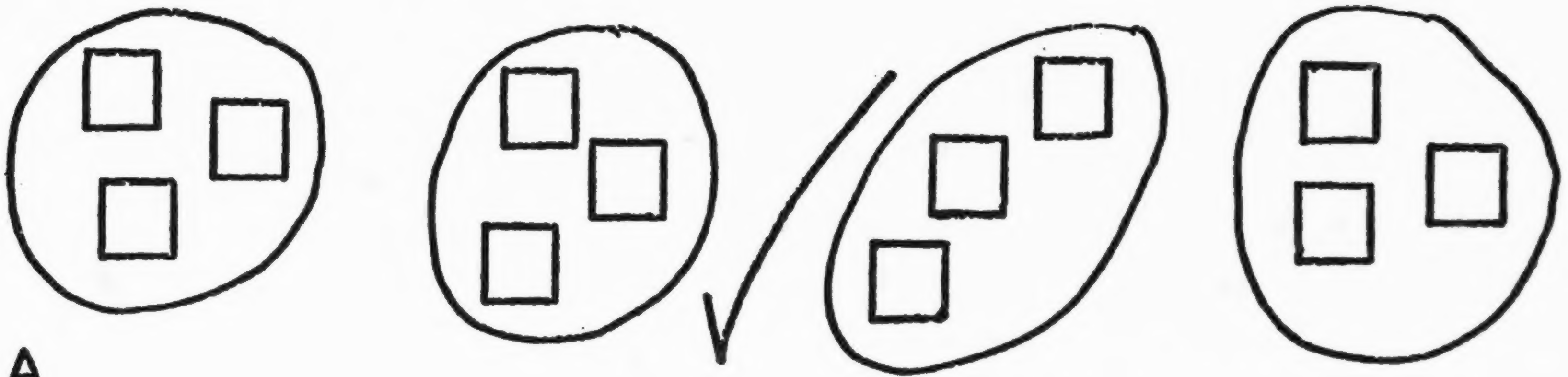


Draw a circle around one-half ($\frac{1}{2}$) of the set.

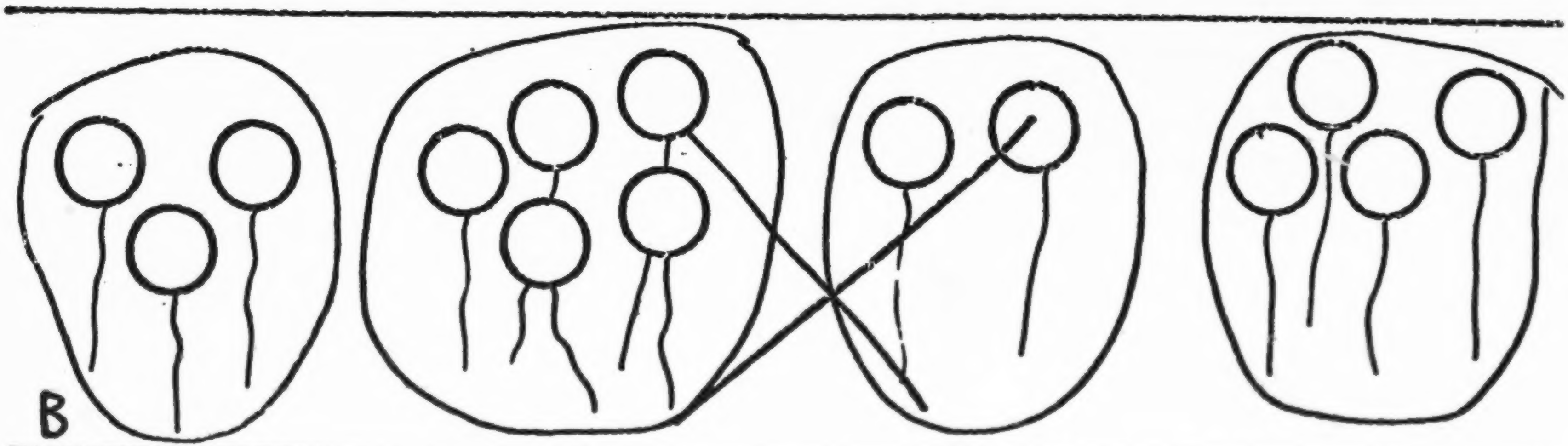


Name________ Joe B. Date_____ Room____ 4

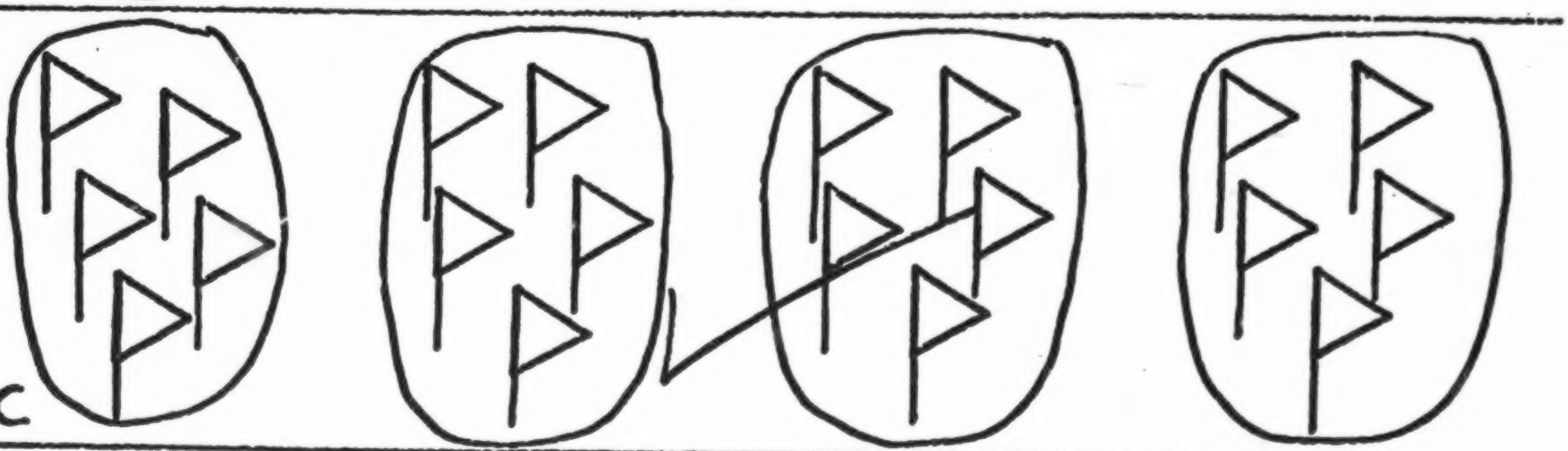
Get disc C-Frac-3-22R



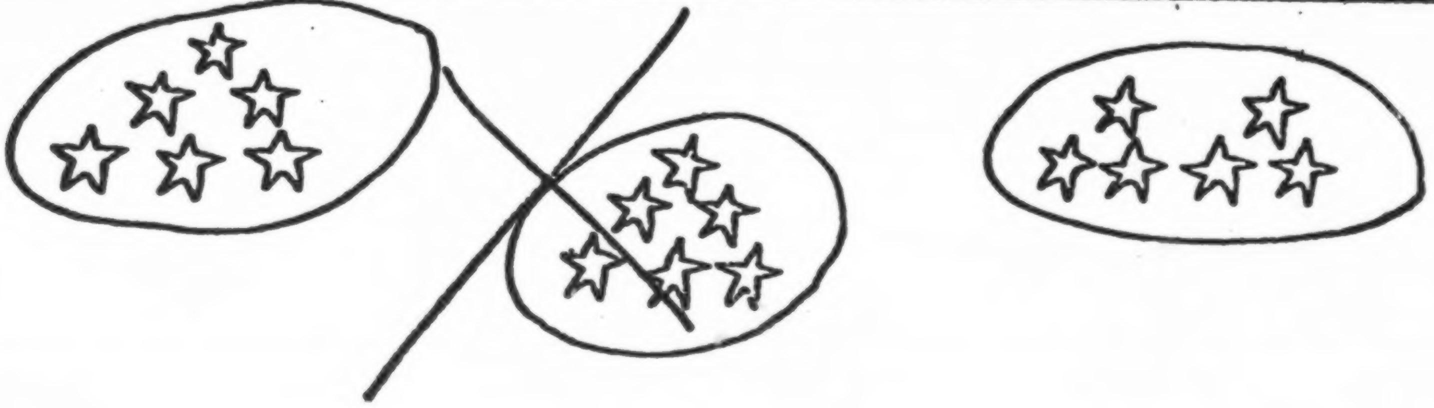
A



B

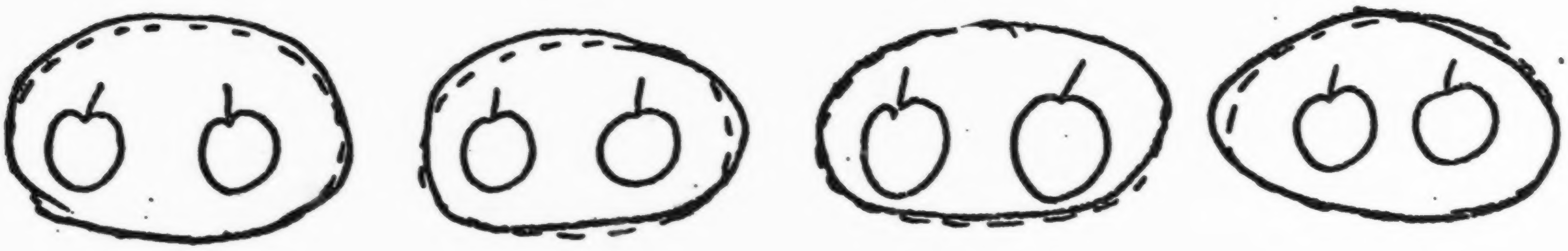


C

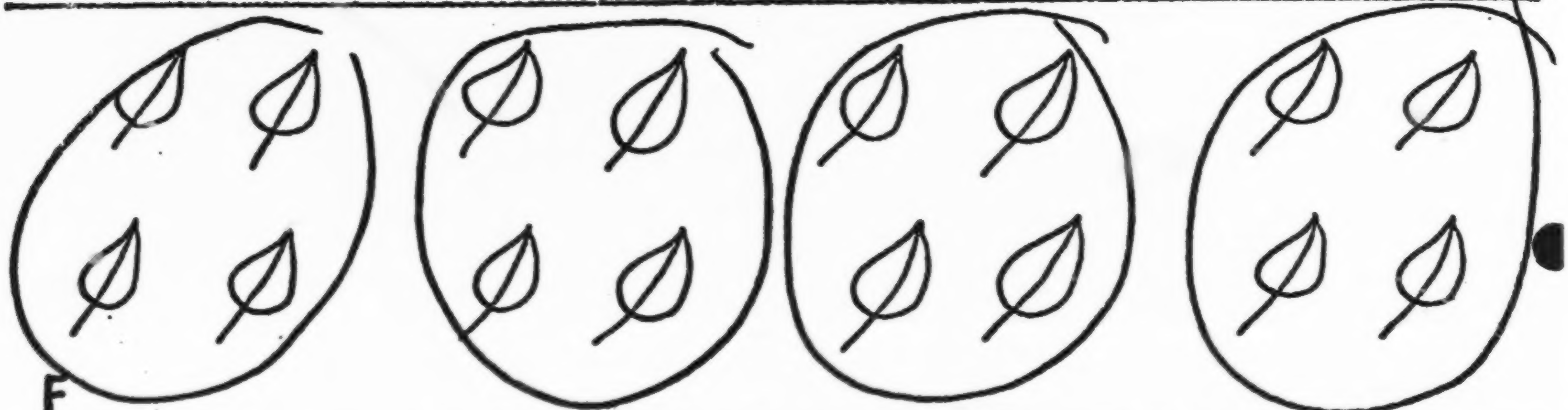


D

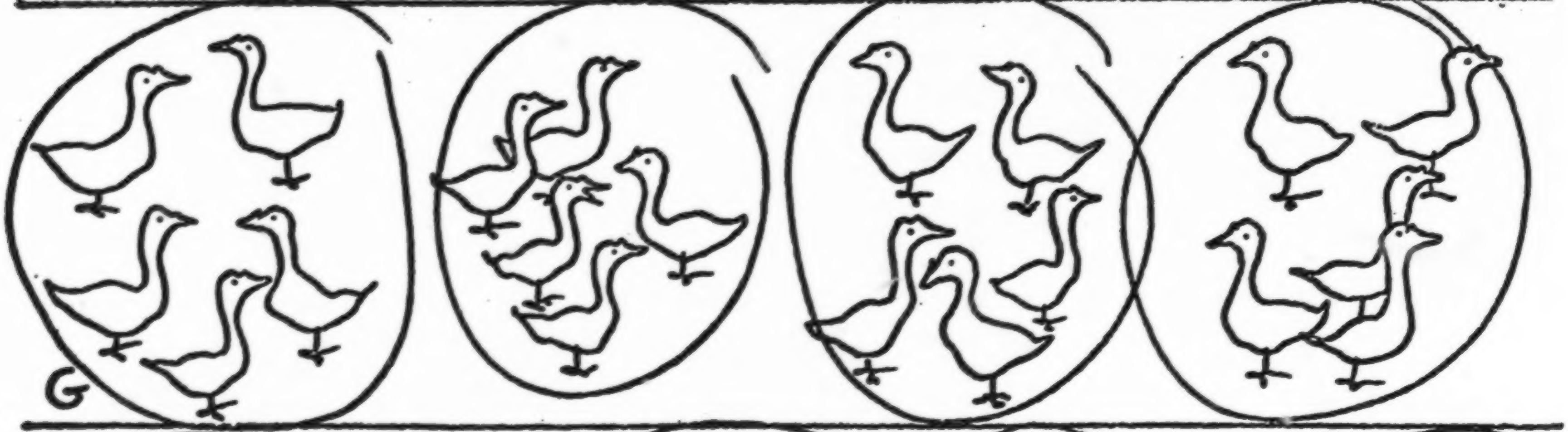
Name Joe B. Date_____ Room_____ 4



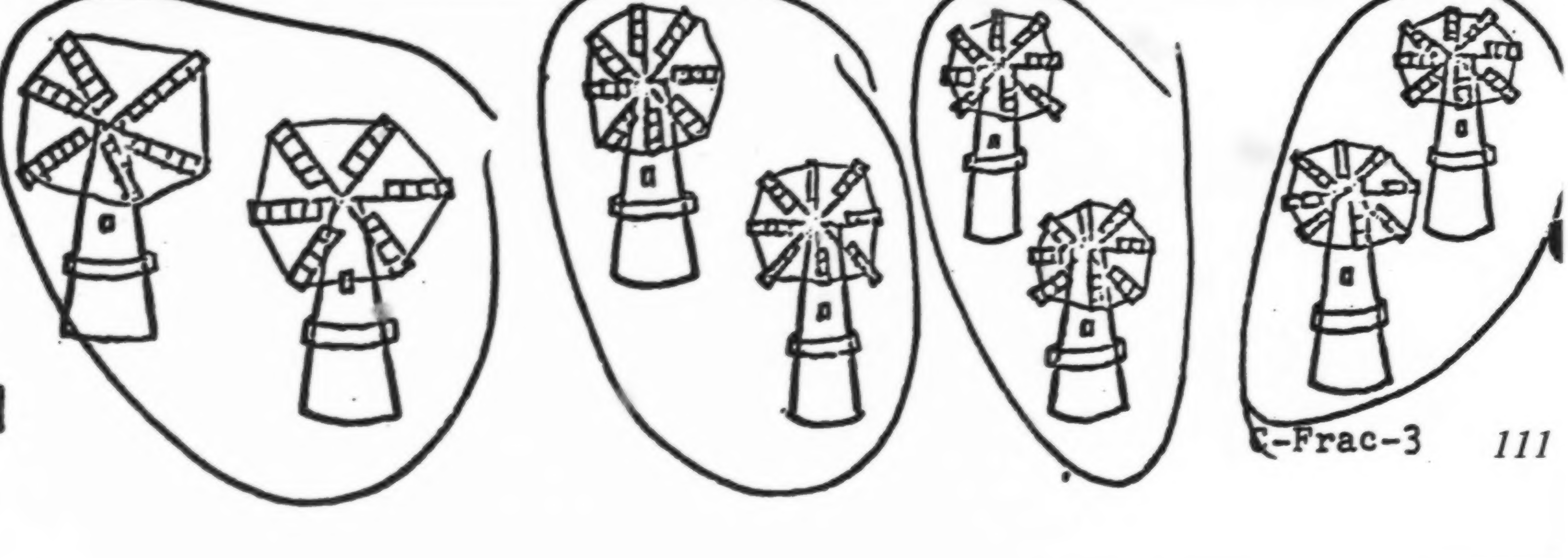
E



F



G



H

This is the CET completed by Joe and corrected by the Aide.

You record (in the role of Aide) the scores on the Prescription Sheet.

You look at Joe's work on the CET:

Joe can: PART I - Divide sets into 1/2's, 1/3's, 1/4's ; match divided set in 1/4's and 1/3's with written fraction clues.
PART II - Divide a set into 1/4's.

Joe cannot: Match a set divided into 1/2's with written fraction name.
Write fraction name for set divided into 1/2's.

You describe how Joe worked with this prescription: Joe appeared very confused while completing this CET.

Based on your analysis of Joe's work, you decide to:

X Extend prescription for the same skill.
____ Assign a second CET for the same skill.
____ Assign entire CET for Skill ____.
____ Assign Part II of CET for Skill ____.
____ Write initial prescription for Skill ____.

Why? Joe does not demonstrate an understanding of 1/2's.

Based on the previous diagnosis of Joe's behavior, his performance on the Pretest (Skill 3, in particular) and the CET for Skill 3, you decide to prescribe the following on 2/10:

Page	Reason
1	Divides sets into 1/2's.
2	Divides sets into 1/2's.
15	Divides sets into 1/2's. and write fraction name
9	Divides sets into 1/2's, 1/3's and 1/4's.
11	Discriminates among sets divided into 1/2's, 1/3's, and 1/4's.

You estimate the time needed as: 1 class period

After you recheck these five pages, you record the page number and the date on line 1 of Joe's Prescription Sheet #2.

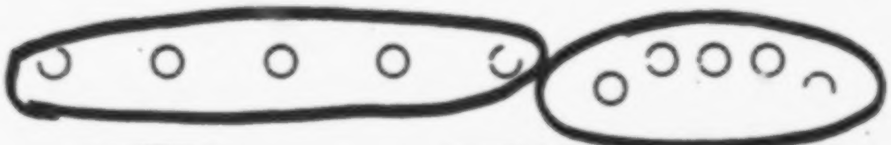
CET I

Divide each set according to the word on the left.

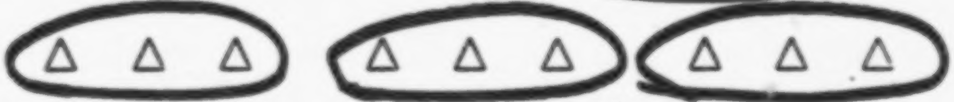
CIRCLE CORRECT BOX

TL. PTS.	
6	100%
NO. OF PTS.	%
[✓ 5]	[✓ 83]
4	67
3	50
2	33
1	17

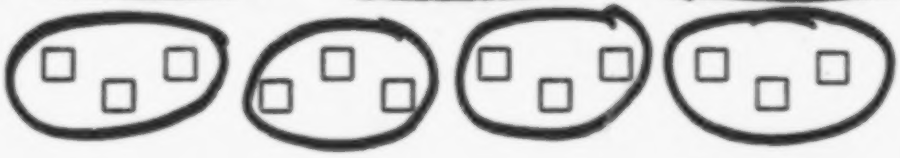
halves



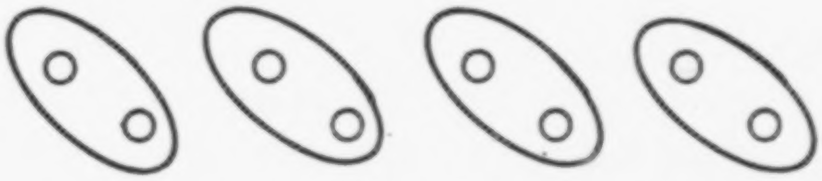
thirds



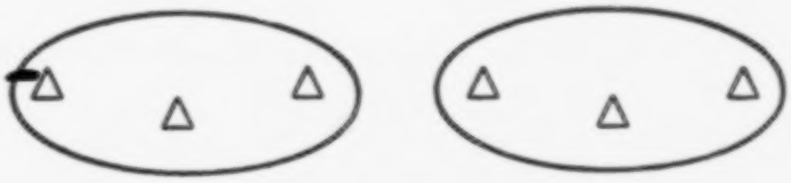
fourths



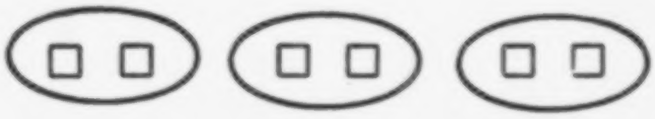
Circle the word that tells how each set is divided.



halves
[✓ fourths]
thirds



halves
fourths
[✓ thirds]

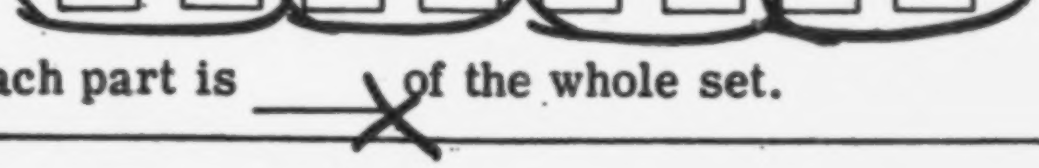


halves
fourths
[✓ thirds]

CIRCLE CORRECT BOX

TL. PTS.	
2	100%
NO. OF PTS.	%
[✓ 1]	[✓ 50]

Divide this set into four equal parts.



Each part is _____ of the whole set.

These are the five skill sheets completed by Joe and corrected by the Aide.

You study the scores and look at Joe's work on the skill sheets:

Joe can: Divide simple sets in halves, thirds and fourths.

Joe cannot: Divide sets that contain massed objects; divide sets into mixed fractional parts.

You describe how Joe worked with this prescription: Joe worked too rapidly on this material and made errors of incompletion, omission.

Based on your analysis of Joe's work, you decide to:

X Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
_____ Assign entire CET for Skill ____.

Why? Joe gets confused in dividing sets with many objects; he needs to learn to divide sets with accuracy.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 3, in particular) and on the skill sheets for this skill, you decide to prescribe the following on 2/12:

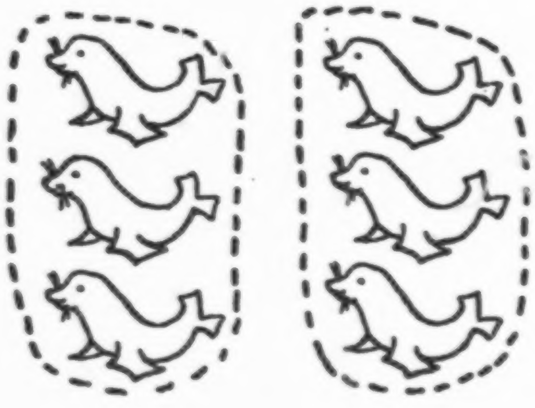
Page		Reason
Blocks	12	A group of four students need work in fractional parts (1/4, 1/3, 1/2). You have prepared a brief review and a game sheet for a small group instructional setting with the blocks as manipulative aids.
Teacher Page	03	

You estimate the time needed for the small group as: approximately 15-20 minutes

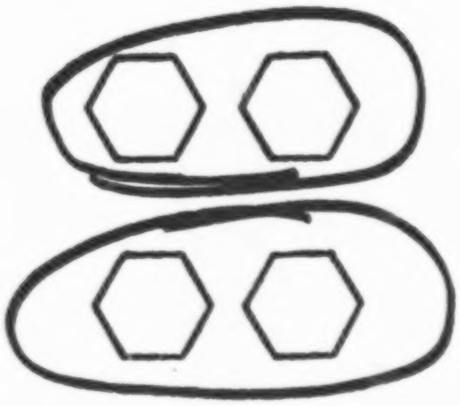
After you recheck this plan, you record the page numbers and the date on lines 6-7 of Joe's Prescription Sheet.

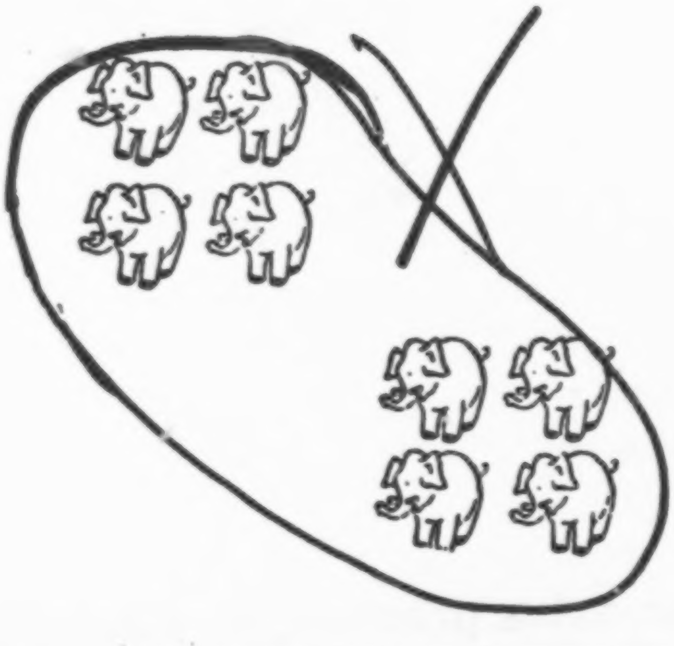
1

Count the objects in each set. Now divide the sets into two parts equal in number. Each part is called one-half. Draw a ring around each half of the sets below.



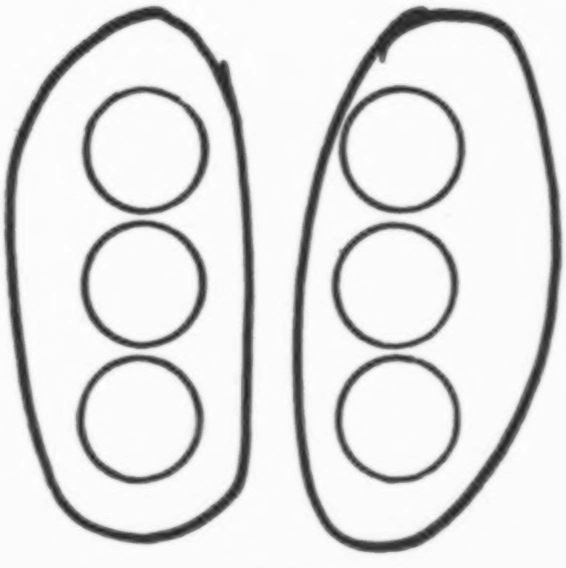
one-half one-half

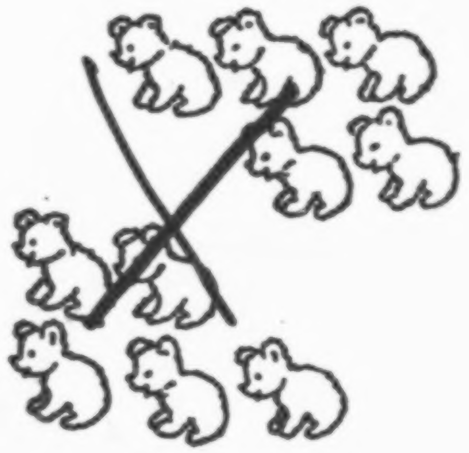


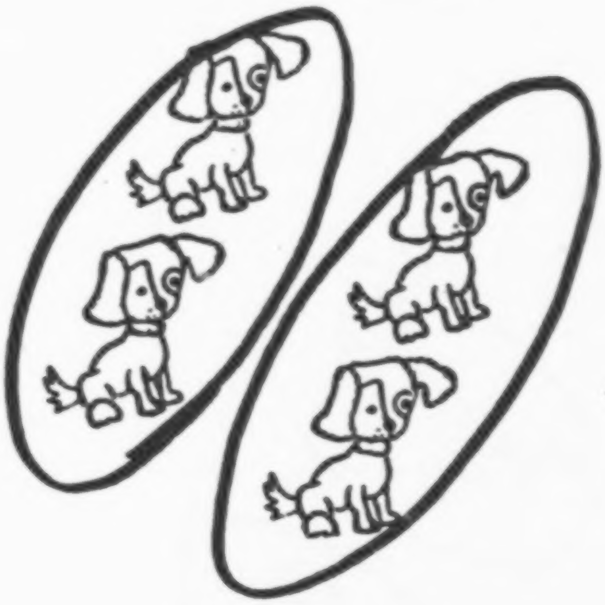


2

When you divide a set into two parts equal in number, each part is called one-half. Draw a ring around each half of the sets below.

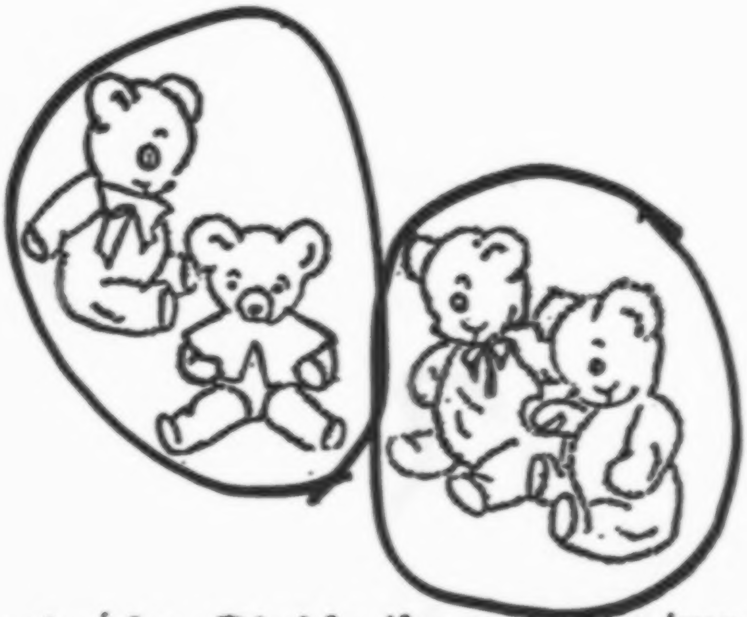






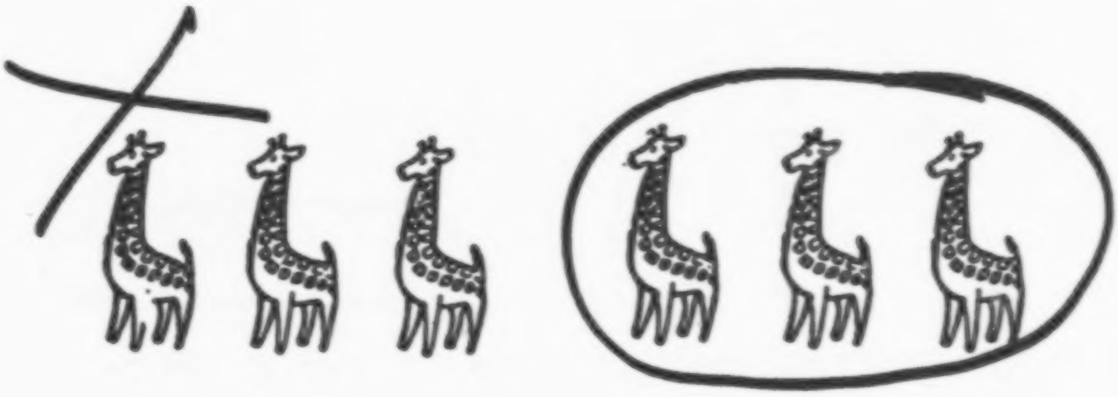
For extra practice, do Page 15.

Count the animals in this set.



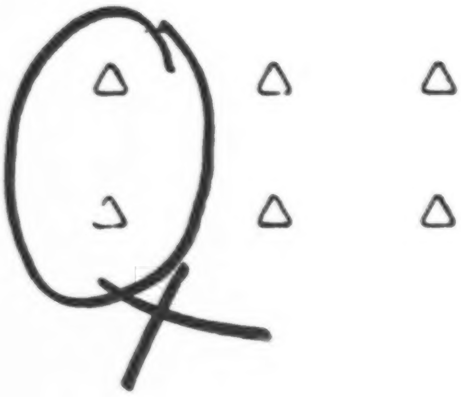
There are 4 animals. Divide the set into two parts of equal number. Each part is called one-half.

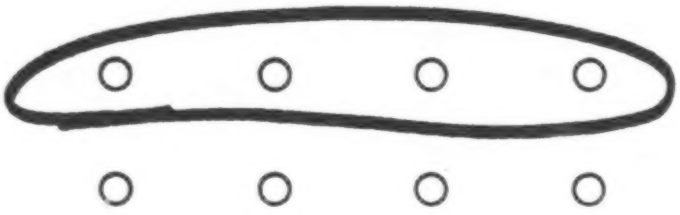
Count the animals in this set.



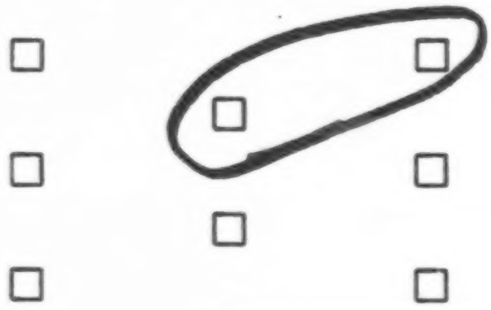
There are 6 animals. Divide the set into two parts of equal number. Each part is called one-half.

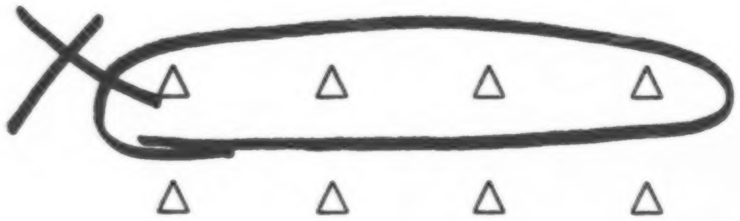
Draw a ring around one-half ($\frac{1}{2}$) of each set.



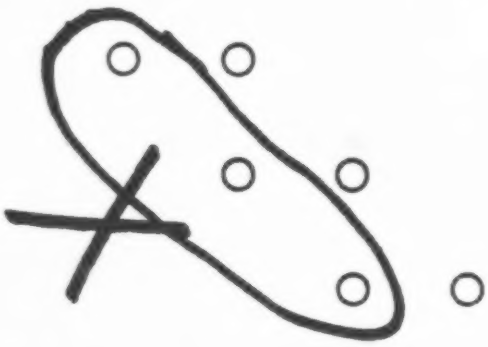


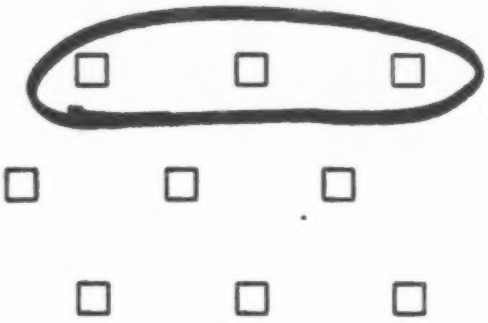
Draw a ring around one-fourth ($\frac{1}{4}$) of each set.





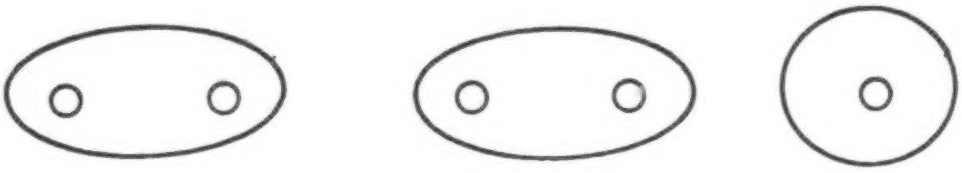
Draw a ring around one-third ($\frac{1}{3}$) of each set.



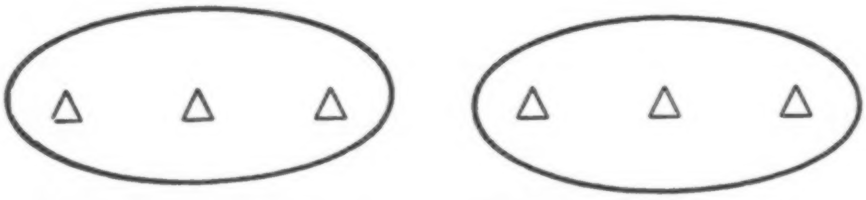


11

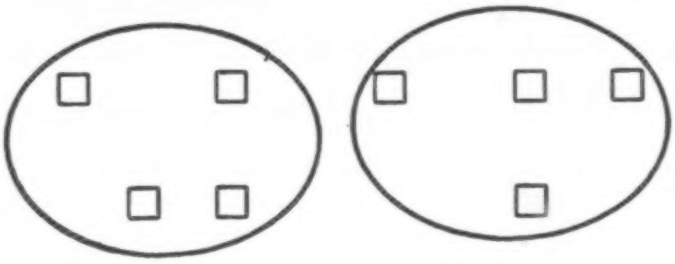
One-half means one of two parts equal in number. Is each set divided into halves? Circle yes or no.



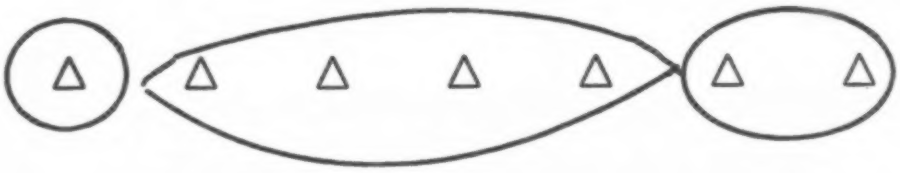
yes [✓ no]



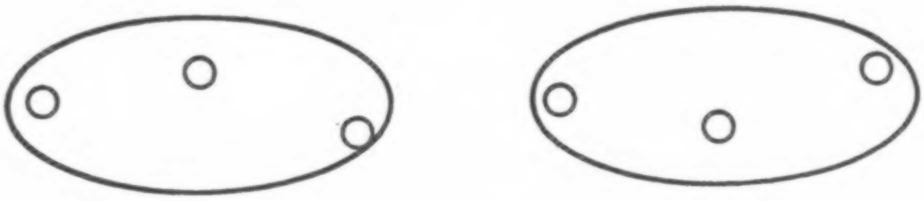
[✓ yes] no



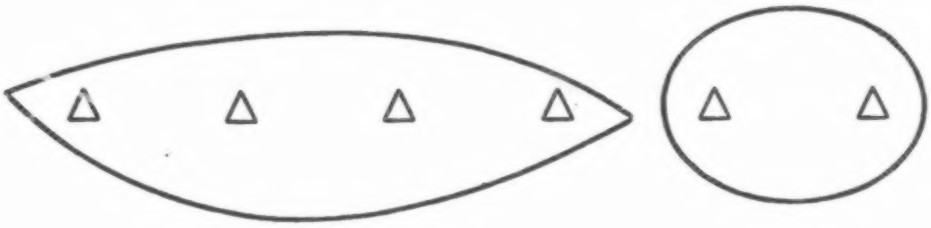
[✓ yes] no



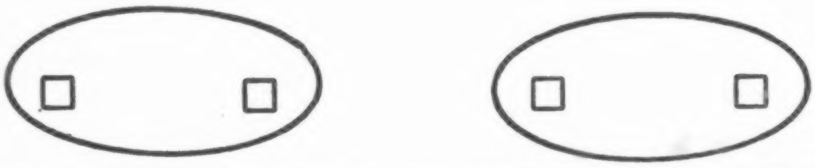
yes [✓ no]



[✓ yes] no



yes [✓ no]



[✓ yes] no

This is the teacher-made sheet that was completed by Joe in the small group setting. You checked his work before releasing him from the group and recorded the score on his Prescription Sheet at that time.

Joe can: Divide sets of many objects into fractional parts (1/2, 1/3, 1/4) by matching fraction name.

Joe cannot: ____________________

You describe how Joe worked with this prescription: Joe worked very well in the small group; being with the other students allowed him to do some tutoring, which provided encouragement and motivation for him.

Based on your analysis of Joe's work, you decide to:

____ Revise original prescription
____ Extend prescription
X Assign a CET for Skill 3

Why? Joe's performance on the materials indicates mastery of Skill 3.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 3, in particular) and on these skill sheets, you decide to prescribe the following on 2/2:

Page	Reason
19 CET	To test mastery of Skill 3

You estimate the time needed as: 20 minutes maximum

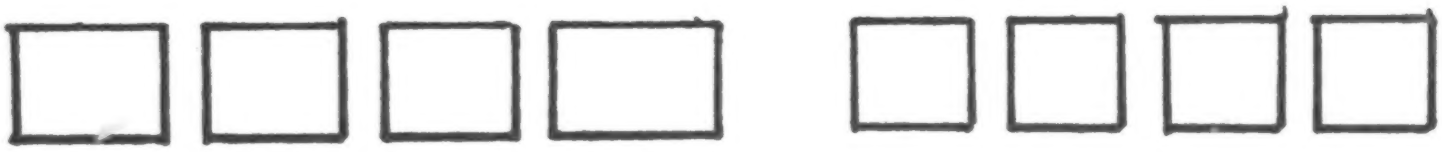
After you recheck this CET, you record the page number and the date on line 8 of Joe's Prescription Sheet.

Name Joe Bean

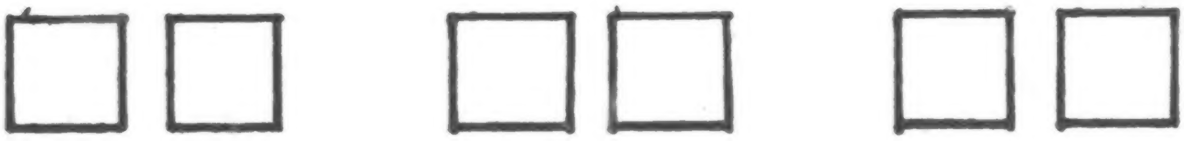
Grade 3

Directions: Get an aid from the math table that can be used to show fractions. Use it to help you work these problems.

1. Arrange your blocks in the space below to show one-half (1/2):



2. Arrange your blocks in the space below to show one-third (1/3):



3. Arrange your blocks in the space below to shoe one-fourth (1/4):

Show this to the teacher.

4	4

This is the CET completed by Joe and corrected by the Aide.

You record (in the role of Aide) the scores on the Prescription Sheet.

You look at Joe's work on the CET:

Joe can: PART I - Divide sets with fraction name clues of halves, thirds, fourths; match fraction names and divided sets.

PART II - - -

Joe cannot: Write the fraction 1/3.

You describe how Joe worked with this prescription: Joe worked quickly on this second CET for this skill.

Based on your analysis of Joe's work, you decide to:

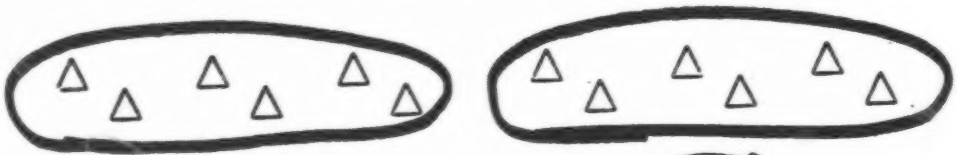
_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
_____ Assign entire CET for skill ____.
_____ Assign Part II of CET for skill ____.
X Write initial prescription for skill 4.

Why? Pretest score (Skill 4) was 100%, but Part II of the CET for Skill 3 was only 50%; Joe may not retain his mastery of this material.

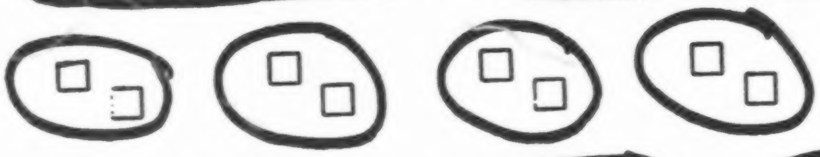
CET II

Divide each set as the word tells you.

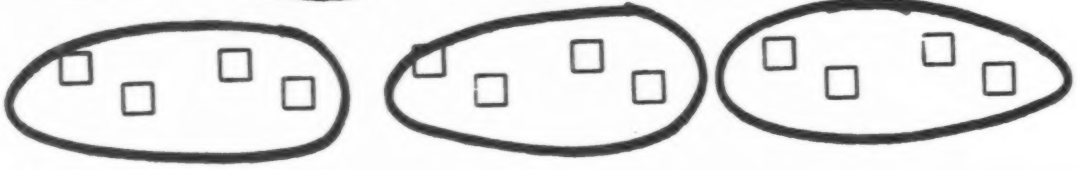
halves



fourths

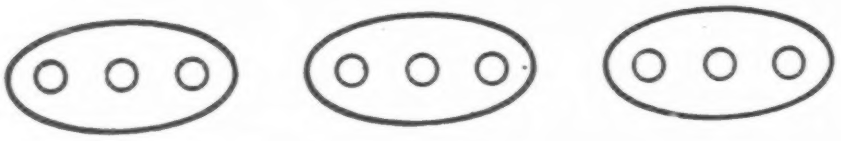


thirds

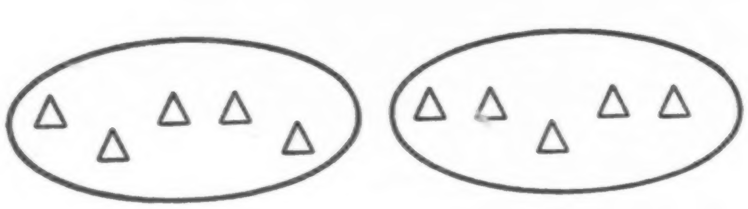


CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 6]	[✓ 100%]
	NO. OF . PTS.	.
	5	83
	4	67
	3	50
	2	33
	1	17

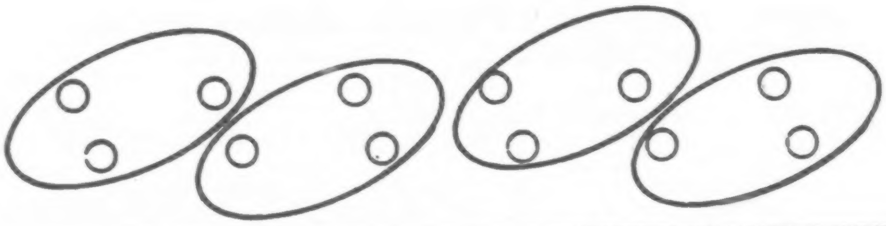
Circle the word that tells how each set is divided.



halves
[✓ thirds]
fourths

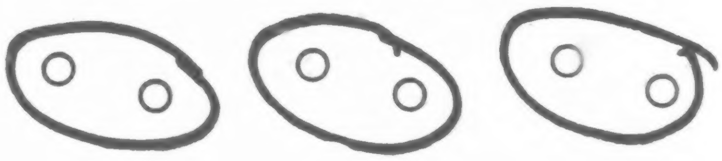


[✓ halves]
thirds
fourths



halves
thirds
[✓ fourths]

Divide the set into three equal parts.



Each part is ____ of the whole set.

CIRCLE CORRECT BOX	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	[✓ 1]	[✓ 50]

This is a copy of the STS booklet for Skill 4.

You examine all the skill sheets and STS sheets (pp. 14 & 15) in the booklet to become familiar with materials for this skill.

Based on the previous diagnosis of Joe's behavior, his performance on the Pretest (Skill 4, in particular) and Part 2 of CET for Skill 3, you decide to prescribe the following on 2/15:

Page	Reason
Student Page	Introduces skill: previews work
1	Divides sets into halves; writes 1/2
4	Divides sets into fourths; writes 1/4
5	Divides sets into thirds; writes 1/3

You estimate the time needed as: 30 minutes

After you recheck these four pages, you record the page numbers and the date on lines 9-12 of Joe's Prescription Sheet.

3

SCHOOL CODE ☐

NAME ______________________________

NUMBER ____________________ CLASS ____________________

ipi

individually prescribed instruction

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL C

FRACTIONS (03)

SKILL 4

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

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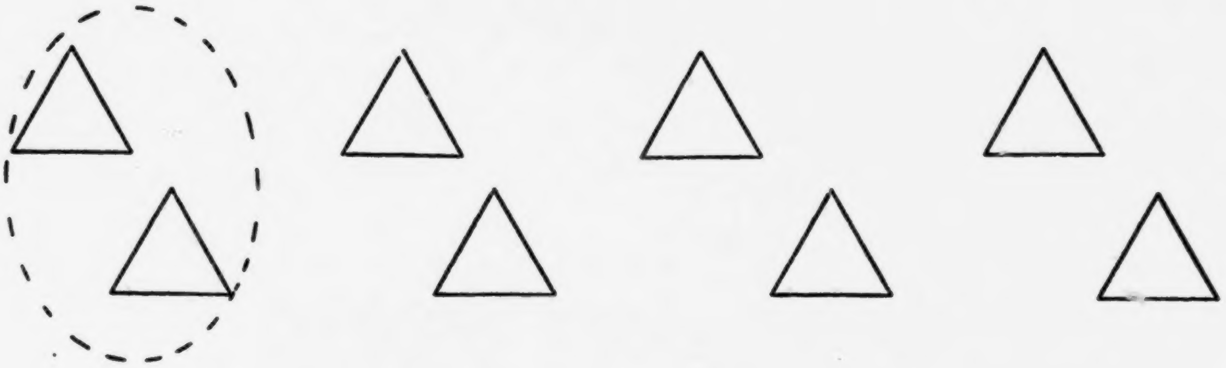
DEVELOPMENTAL EDITION

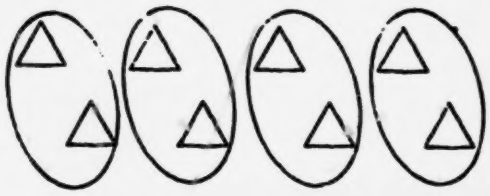
TO THE STUDENT

Draw circles to divide this set into four parts equal in number.



Each circle contains _____ of this set.

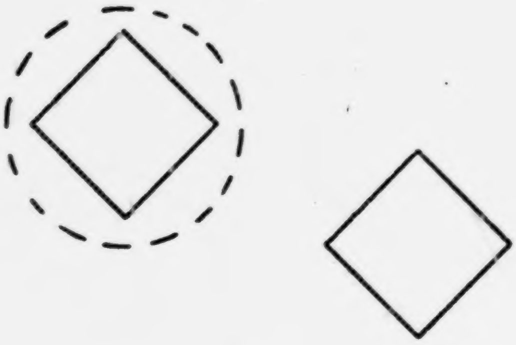
Answers



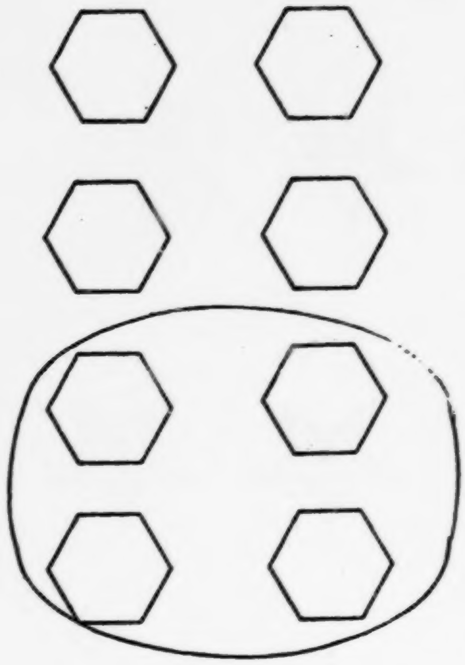
$\underline{\frac{1}{4}}$

Page 1

Circle one-half of each set. Write the fraction of the set you have circled in the blank.

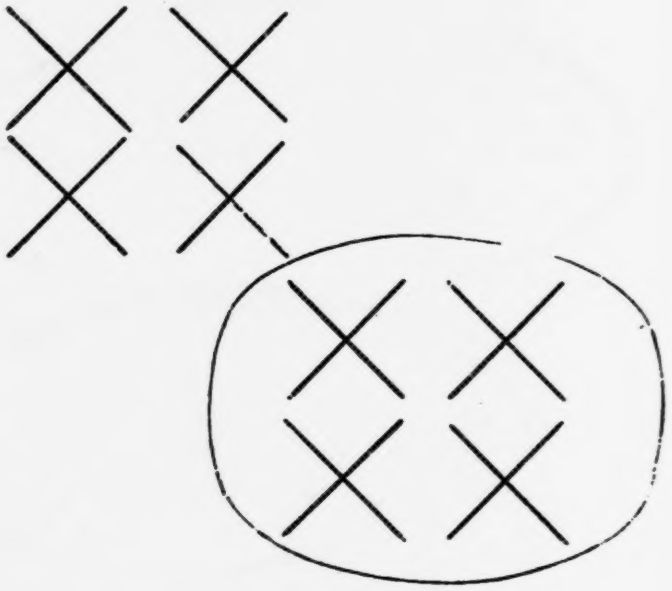


1/2



1/2

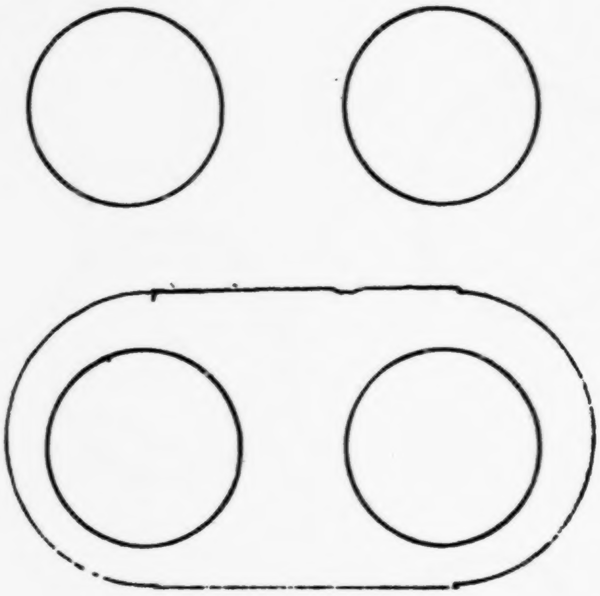
any 1/2



1/2

$\frac{1}{2}$ of this set has 4 things.

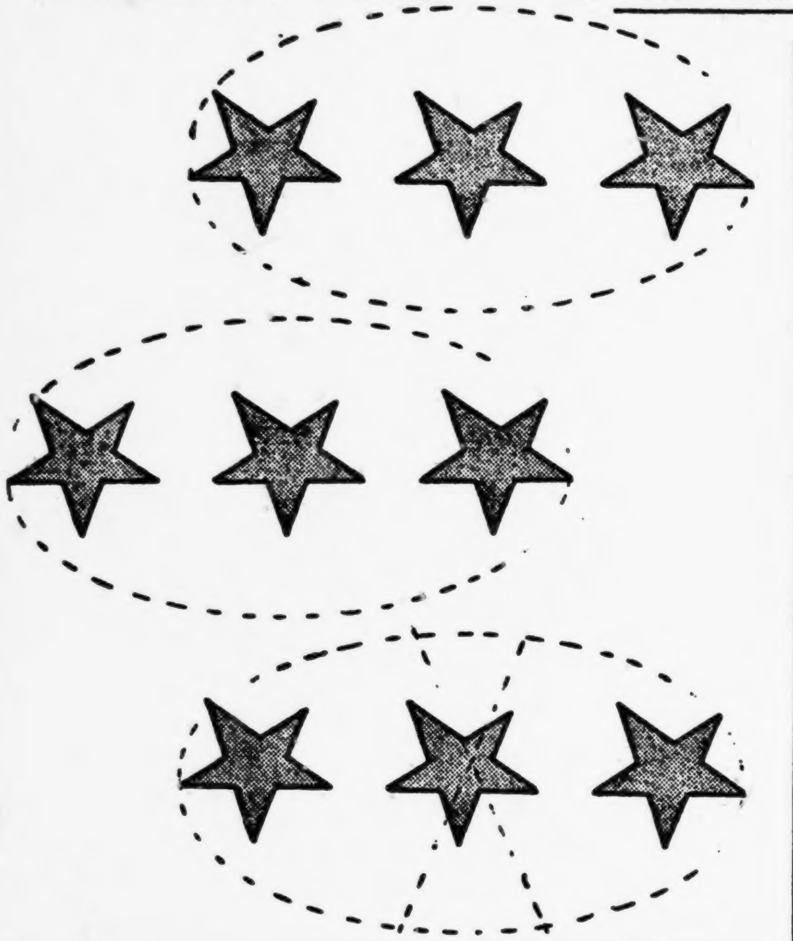
any 1/2

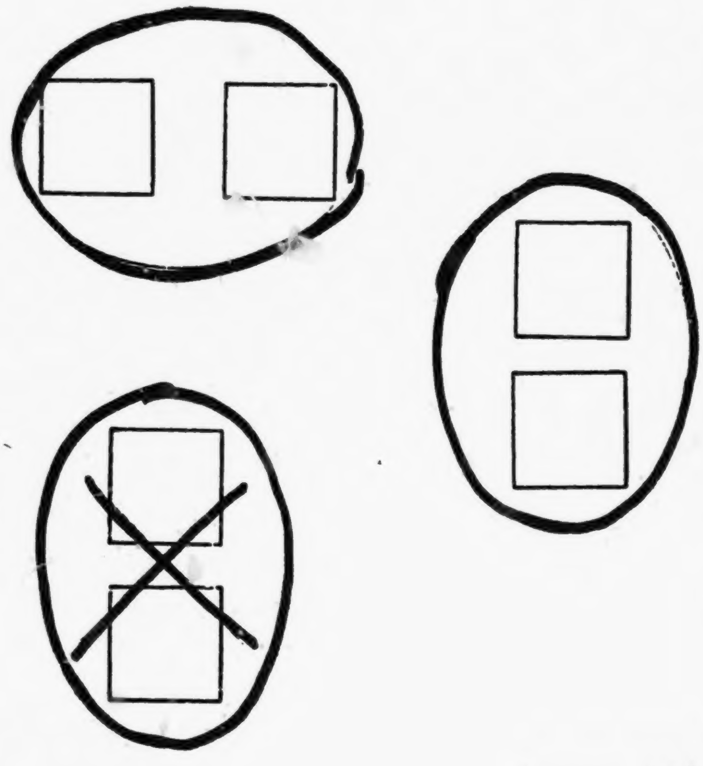


1/2

$\frac{1}{2}$ of this set has 2 things.

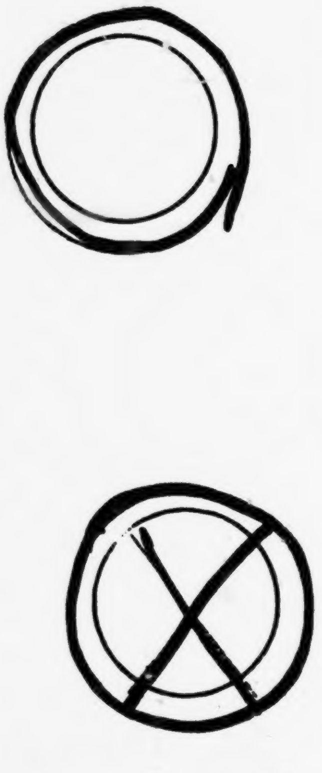
Draw circles to divide each set into 3 parts which are equal in number. Put an X on one-third of each set.





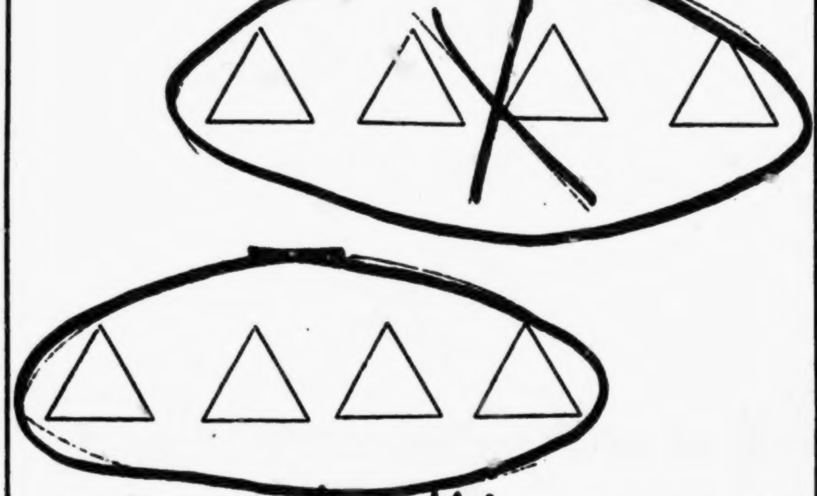
(any 1/3)

(any 1/3)



(any 1/3)

(any 1/3)

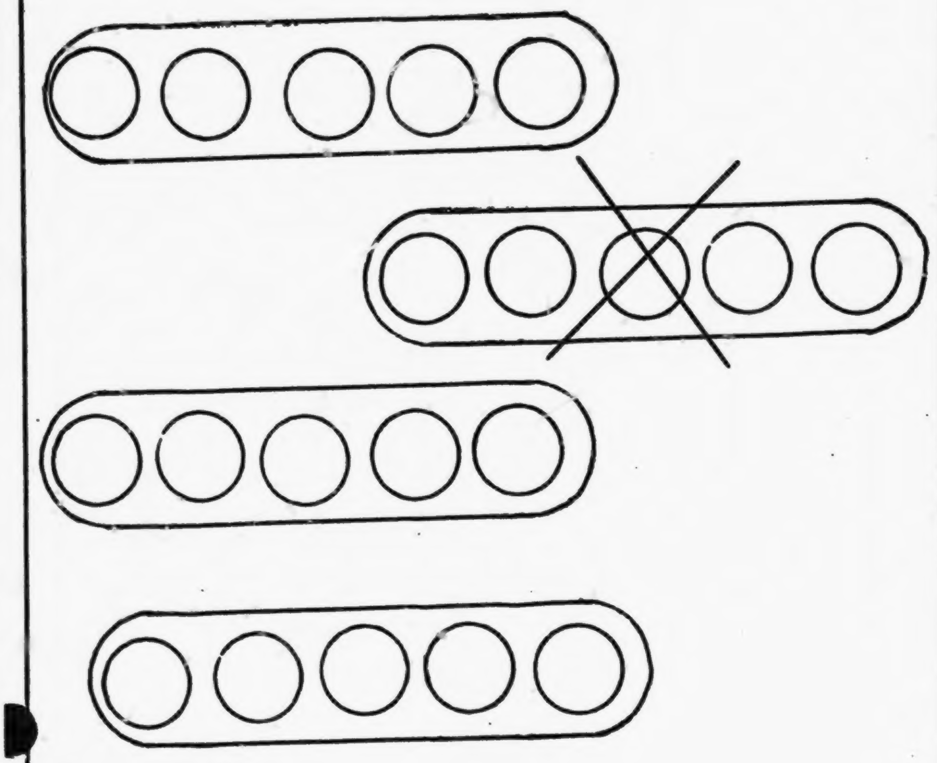


Scoring: 1 pt. for circling process in each set; 1 pt. X-ing process in ea

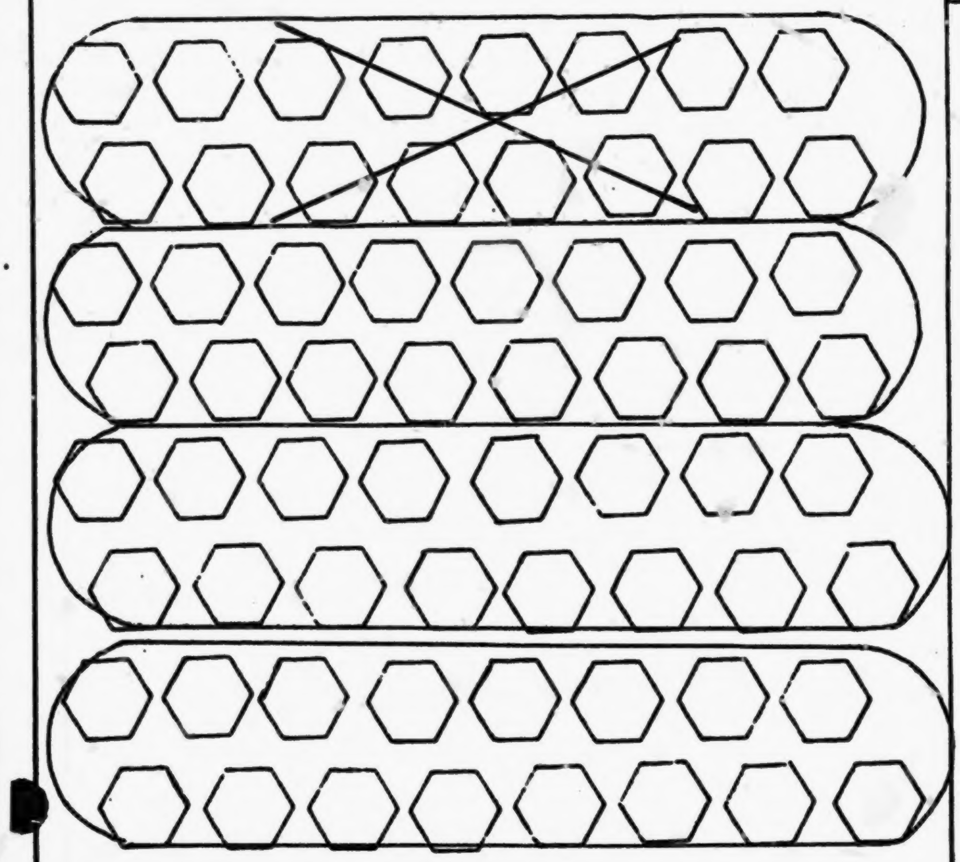
Page 3

Draw circles to divide each set into 4 parts equal in number.

Put an X on one-fourth of each set.

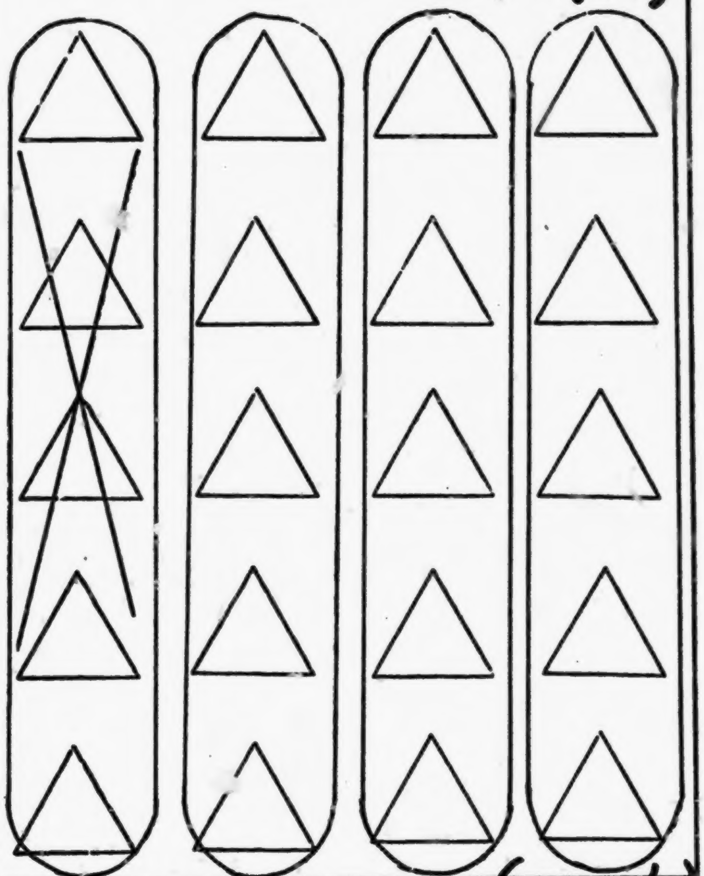


(any 1/4)

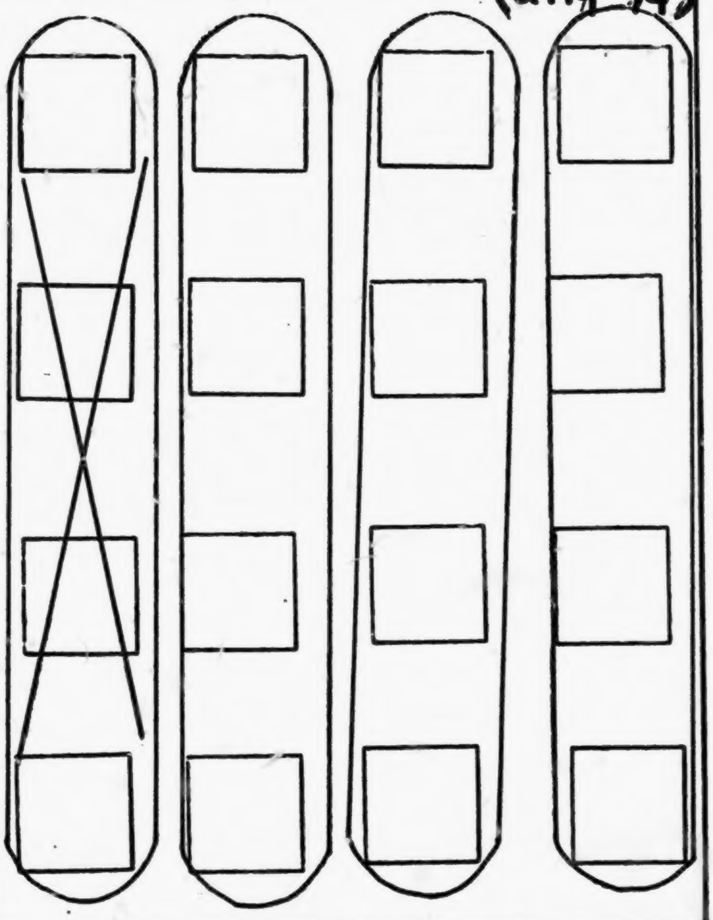


(any 1/4).

(any 1/4)

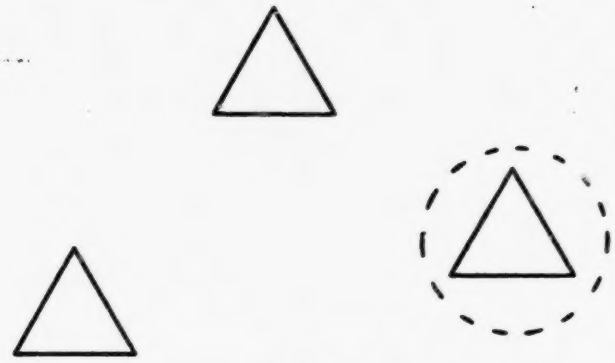


(any 1/4)



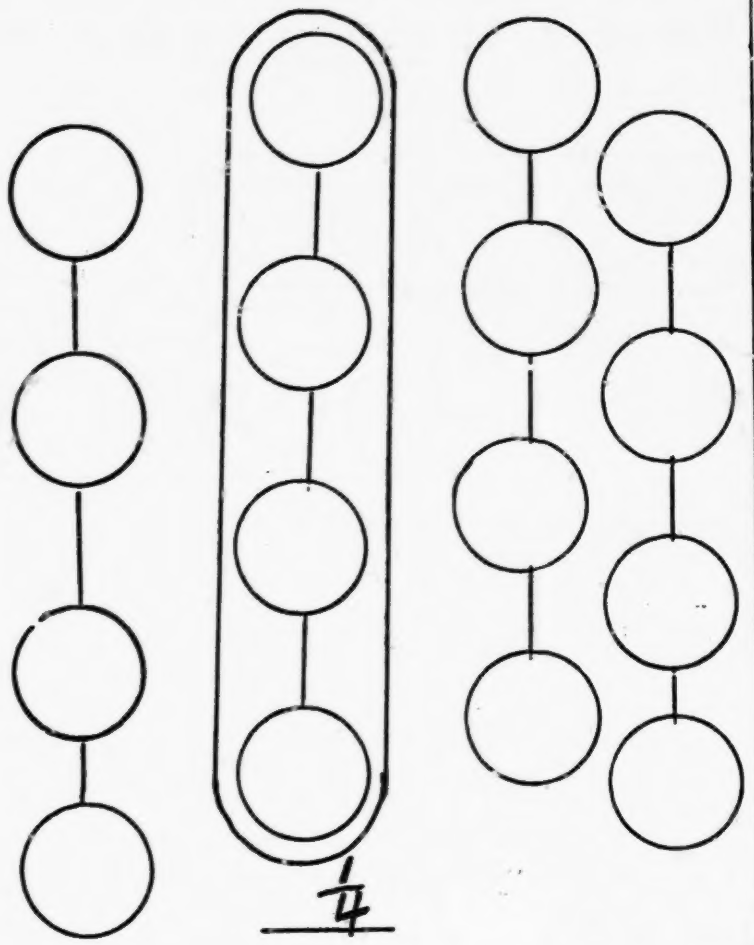
Page 4

Circle one-fourth of each set. Write the fraction of the part of the set you circled in the blank.



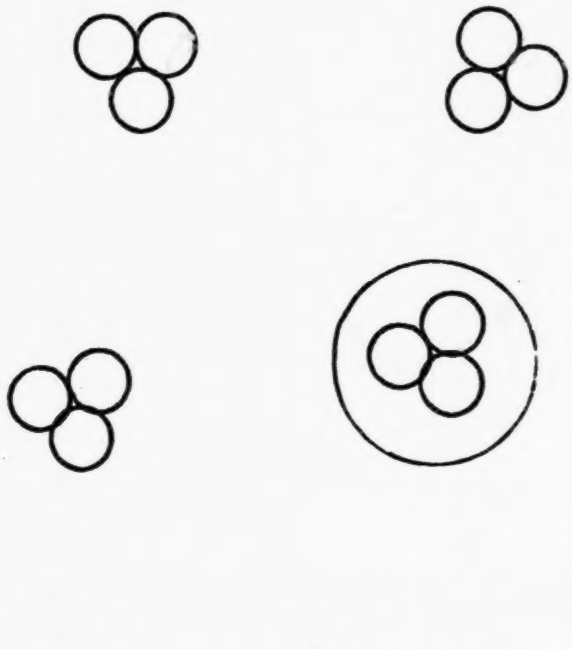
$\frac{1}{4}$

(any 1/4)

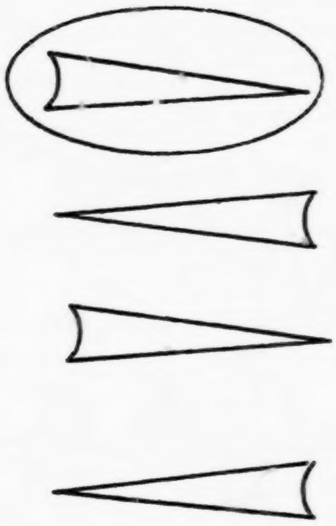


$\frac{1}{4}$

(any 1/4)



(any 1/4) $\frac{1}{4}$



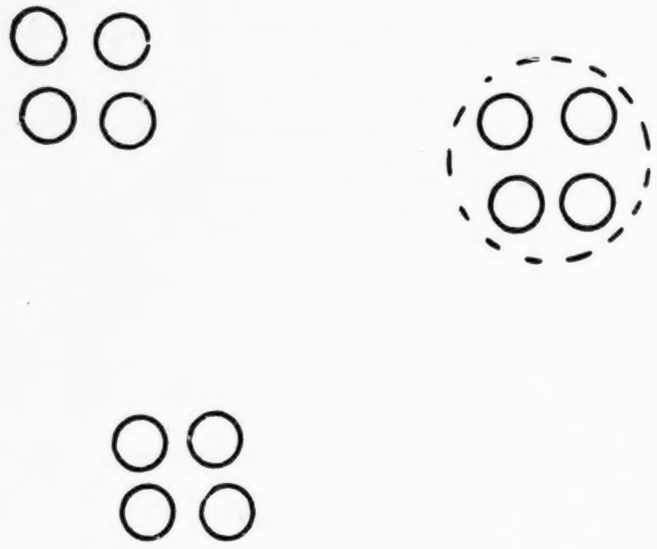
$\frac{1}{4}$

(any 1/4)

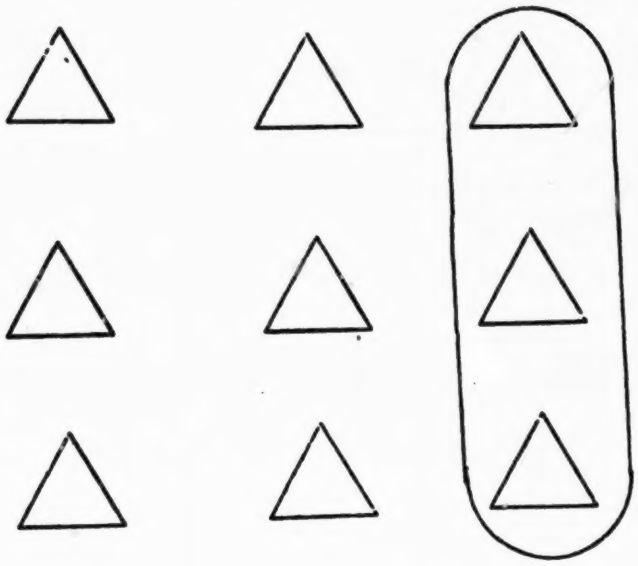
Page 5

Circle one-third of each set.

Write the fraction of the part of the set you have circled in the blank.

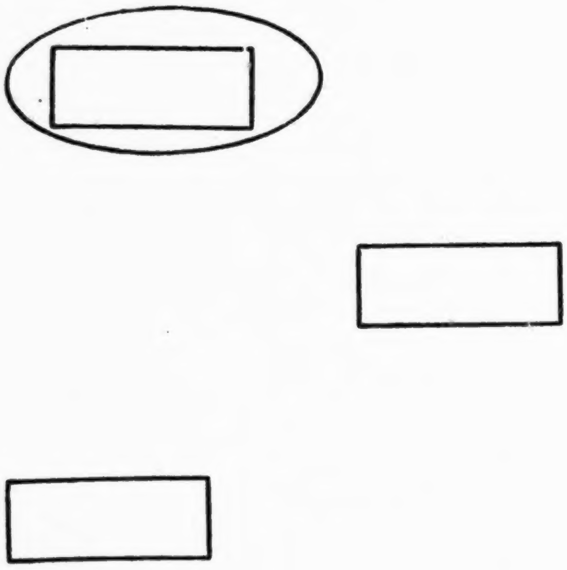


$\frac{1}{3}$



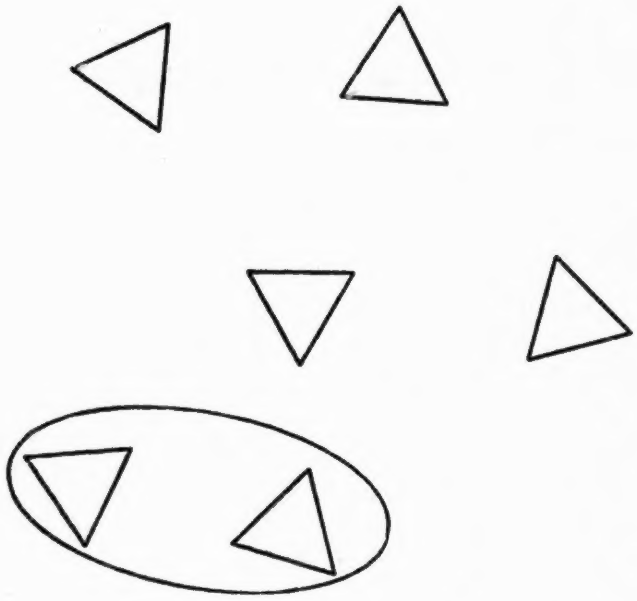
$\frac{1}{3}$

(any 1/3)



$\frac{1}{3}$

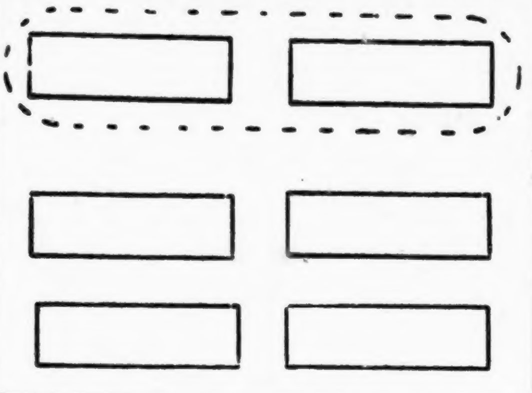
(any 1/3)

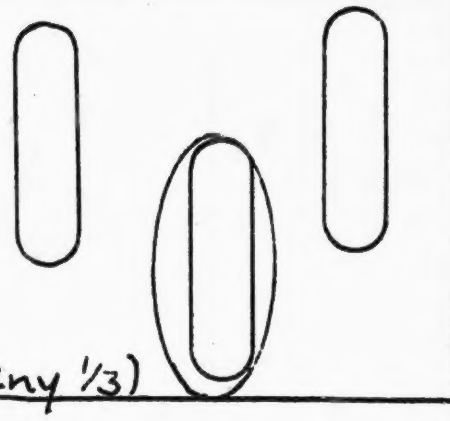


$\frac{1}{3}$

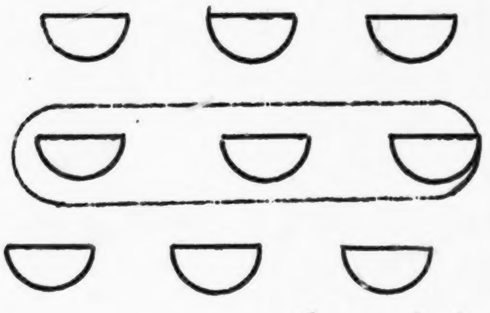
(any 1/3)

Circle $\frac{1}{3}$ of each set below.



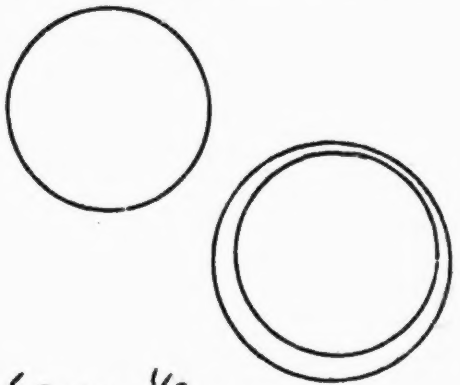


(any 1/3)

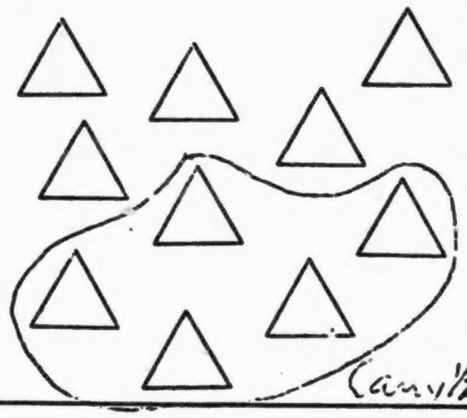


(any 1/2)

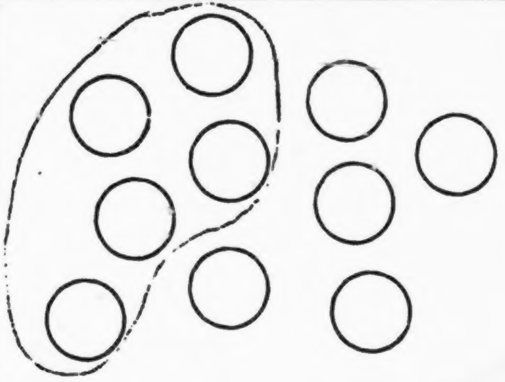
Circle $\frac{1}{2}$ of each set below.



(any 1/2



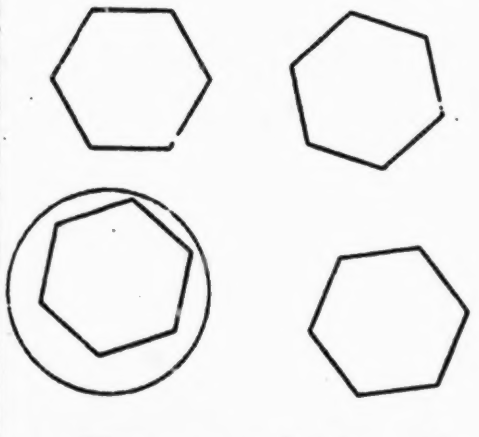
(any1/2)



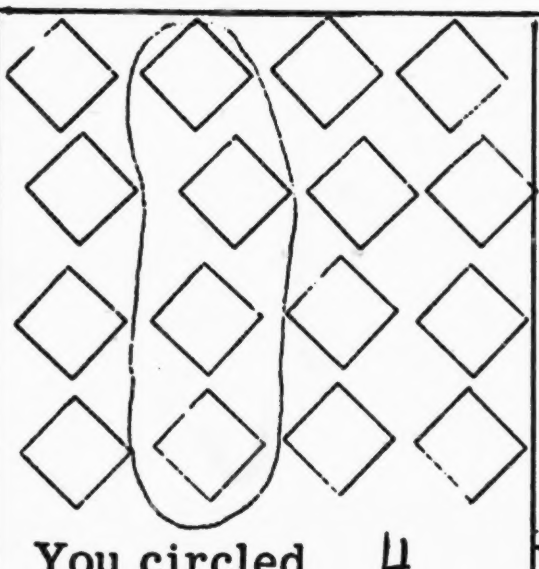
(any 1/2)

Circle $\frac{1}{4}$ of each set below.

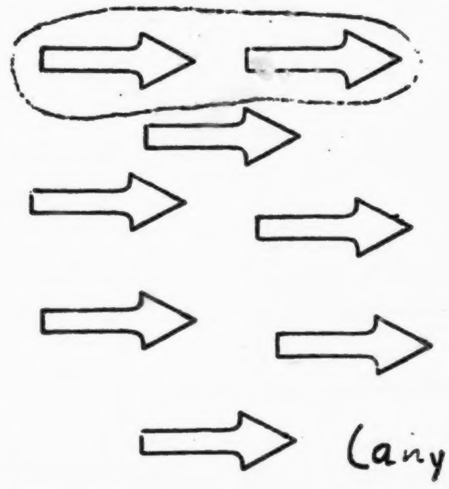
(any 1/4)



You circled 1 out of 4.



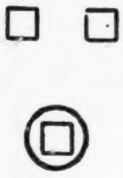
You circled 4 out of 16. (any 1/4)



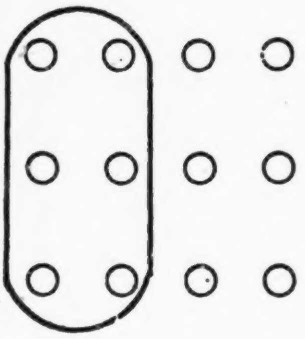
(any 1/4)

You circled 2 out of 8

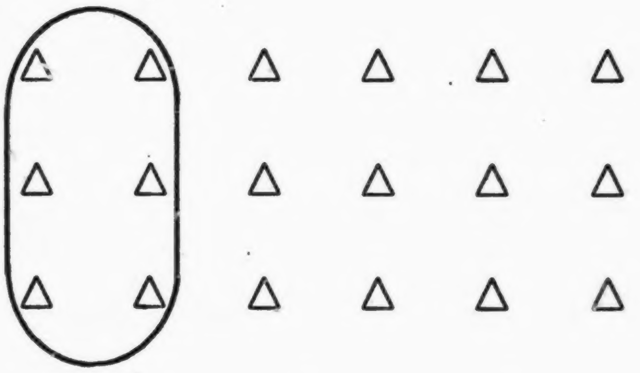
Put an X on the fraction that describes the circled part of each set.



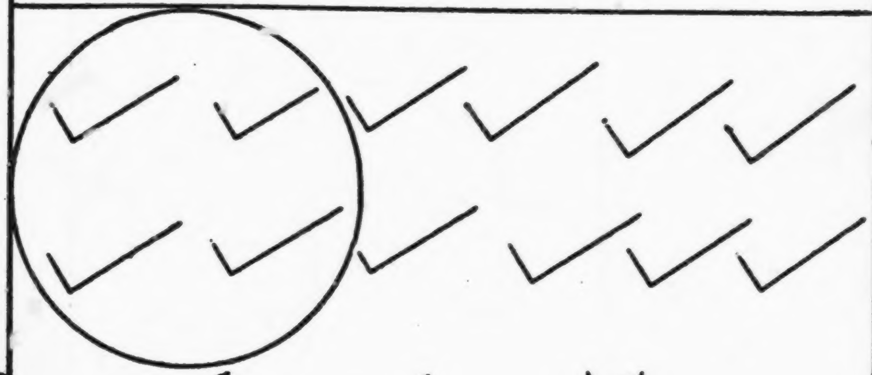
$\frac{1}{2}$ $\xcancel{\frac{1}{3}}$ $\frac{1}{4}$



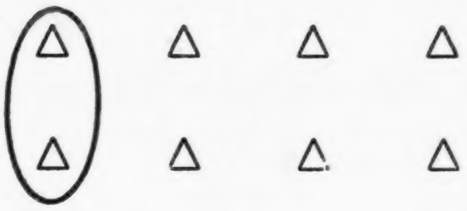
$\xcancel{\frac{1}{2}}$ $\frac{1}{3}$ $\frac{1}{4}$



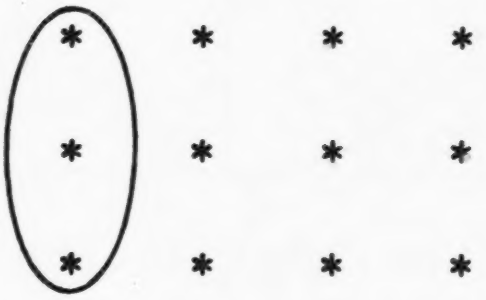
$\xcancel{\frac{1}{3}}$ $\frac{1}{4}$ $\frac{1}{2}$



$\frac{1}{4}$ $\frac{1}{2}$ $\xcancel{\frac{1}{3}}$



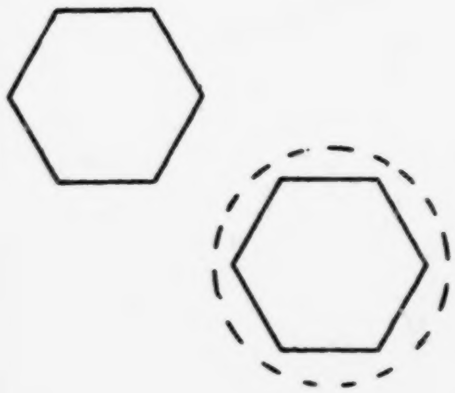
$\frac{1}{3}$ $\frac{1}{2}$ $\xcancel{\frac{1}{4}}$

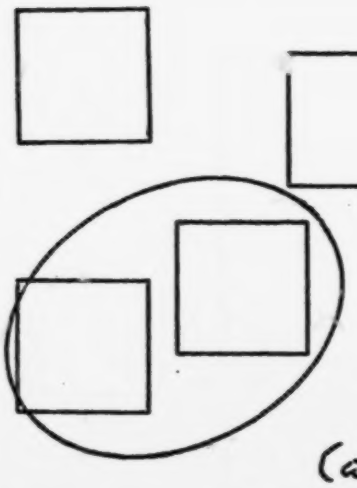


$\frac{1}{2}$ $\xcancel{\frac{1}{4}}$ $\frac{1}{3}$

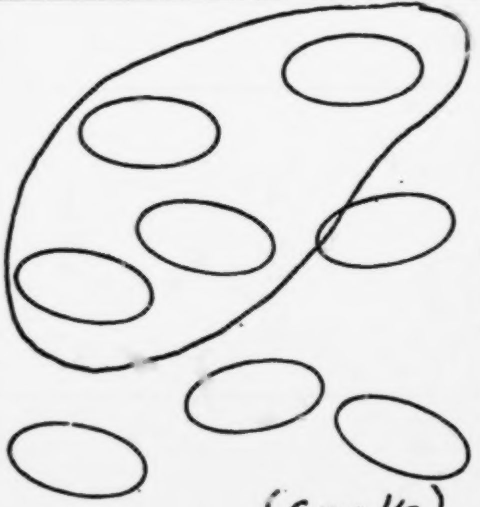
Page 8

Circle $\frac{1}{2}$ of the objects in each set.



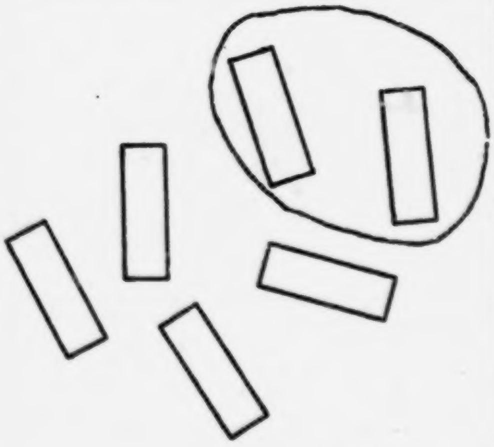


(any 1/2)

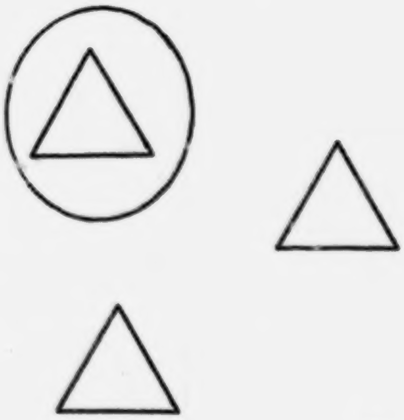


(any 1/2)

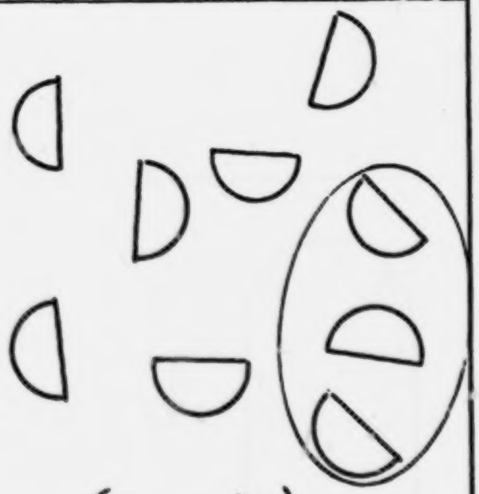
Circle $\frac{1}{3}$ of the objects in each set.



(any 1/3)

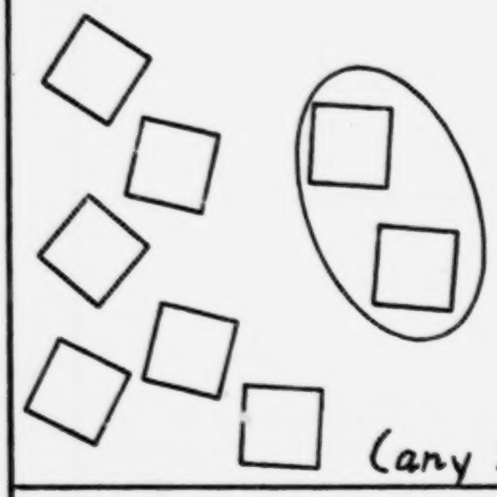


(any 1/3)

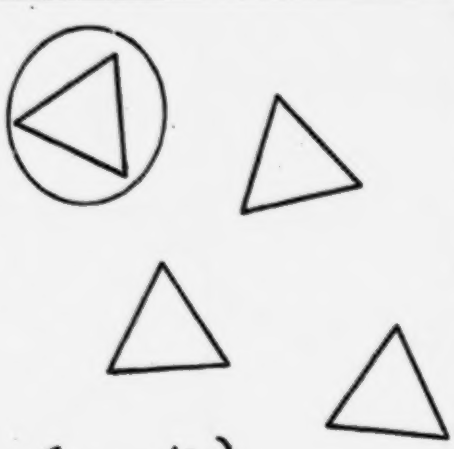


(any 1/3)

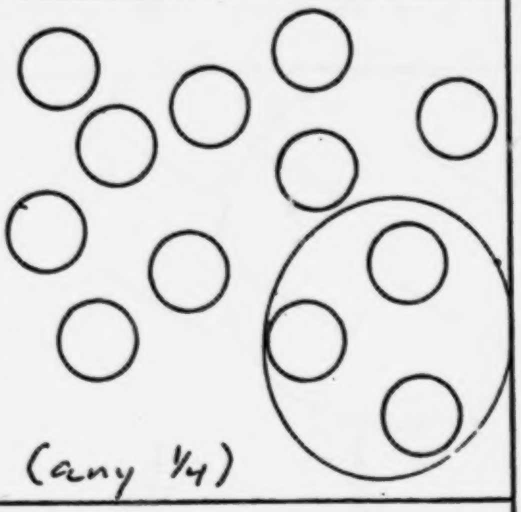
Circle $\frac{1}{4}$ of the objects in each set.



(any 1/4)



(any 1/4)



(any 1/4)

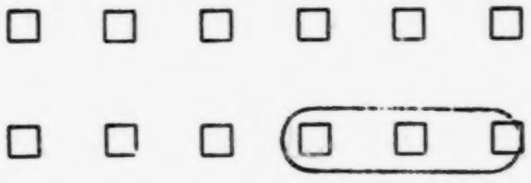
For extra practice, do Page 11.

Page 9

Circle $\frac{1}{4}$ of the objects in each set.

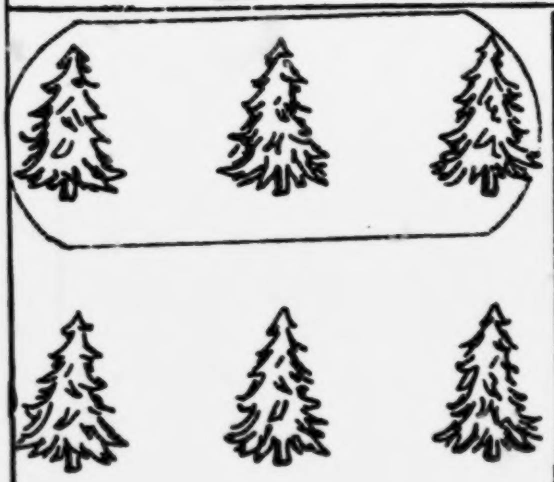
(any 1/4)

(any 1/4)



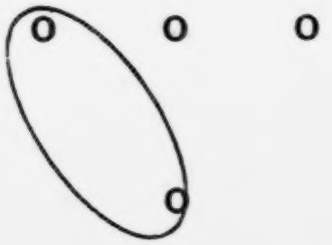
(any 1/4)

Circle $\frac{1}{2}$ of the objects in each set.



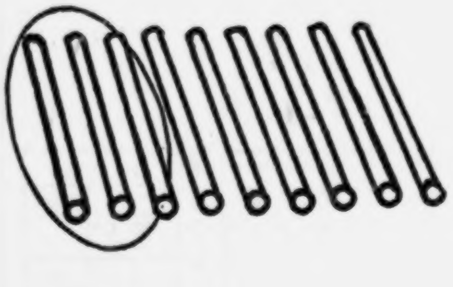
(any 1/2)

(any 1/2)

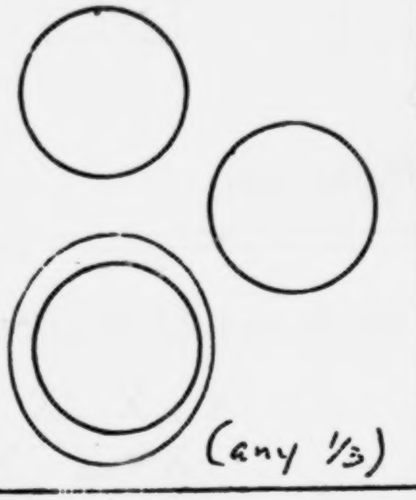


(any 1/2)

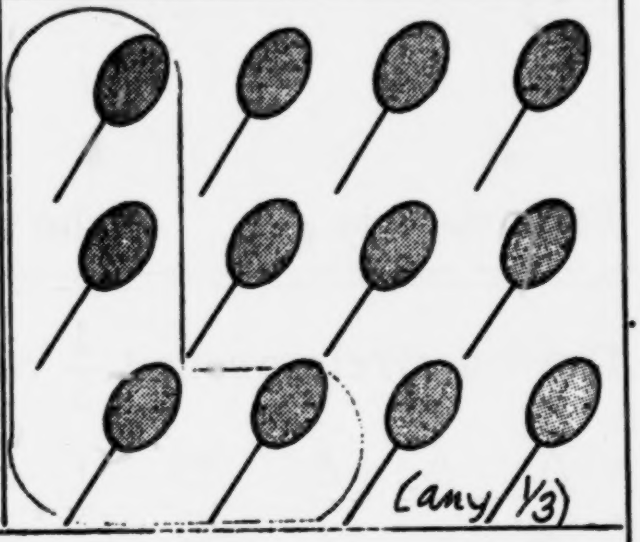
Circle $\frac{1}{3}$ of the objects in each set.



(any 1/3)



(any 1/3)



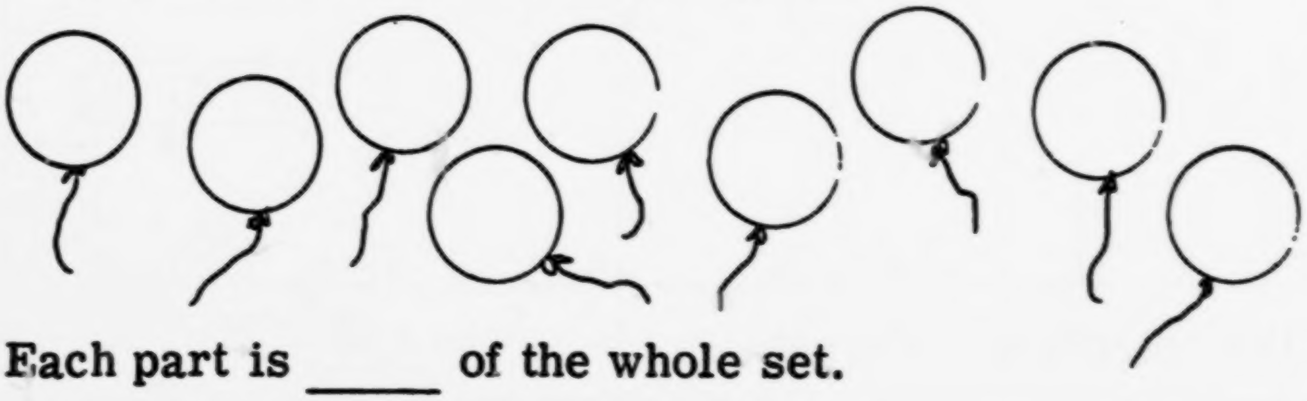
(any 1/3)

For extra practice, do Page 12.

CET I

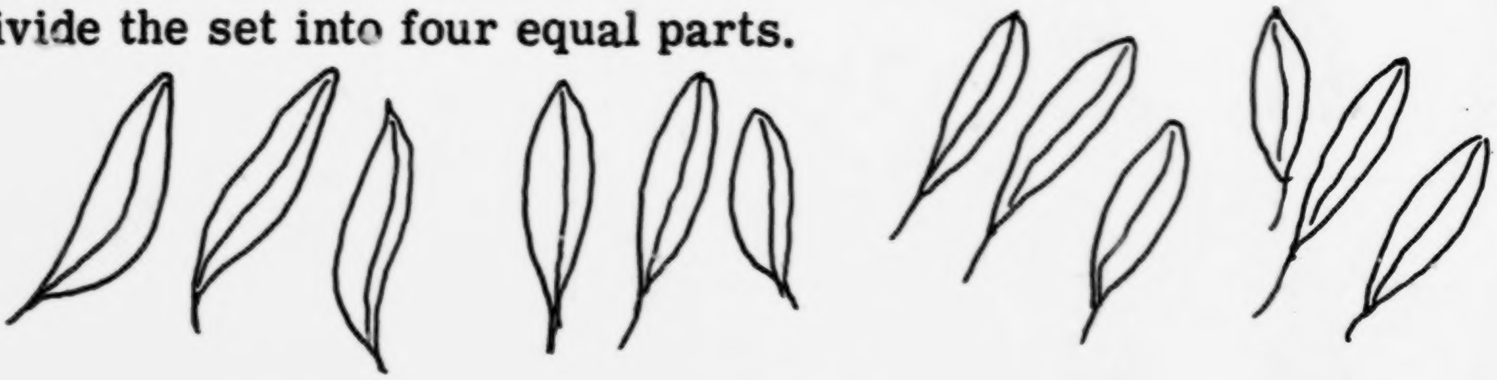
CIRCLE CORRECT BOX	TL. PTS	
	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

Divide the set into three equal parts.



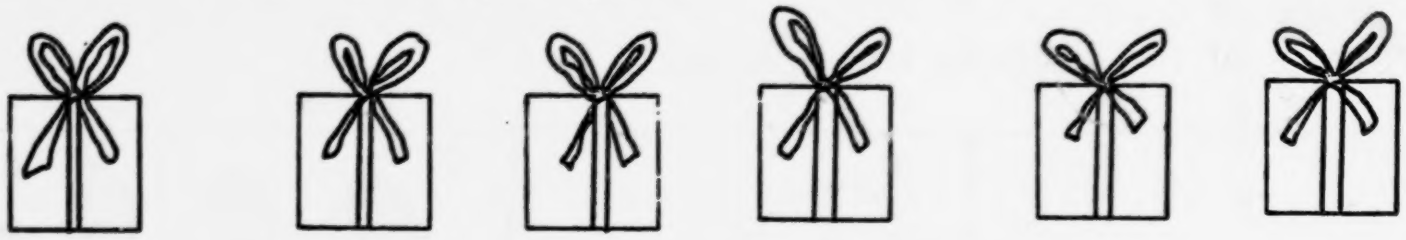
Each part is _____ of the whole set.

Divide the set into four equal parts.



Each part is _____ of the whole set.

Divide the set into two equal parts.



Each part is _____ of the whole set.

CIRCLE CORRECT BOX	TL. PTS.	
	3	100%
	NO. OF PTS.	%
	2	67
	1	33

Draw a circle around $\frac{1}{3}$ of each set of objects.

△ △ △

△ △ △

□ □ □ □

□ □ □ □

□ □ □ □

X X X X

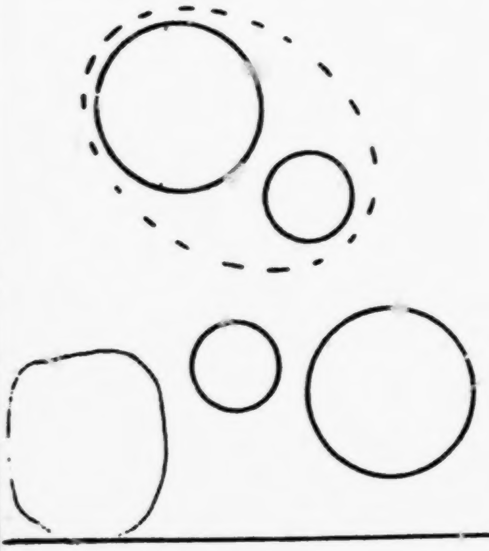
X X X

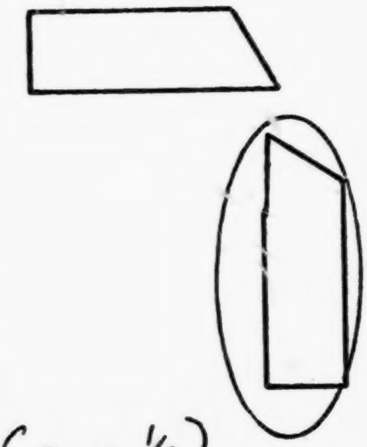
X X

X X X

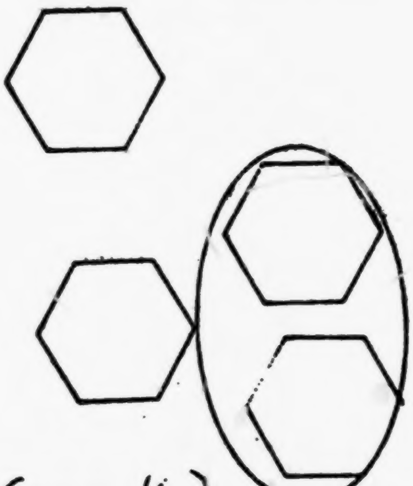
Page 11

Circle $\frac{1}{2}$ of the objects in each set below.



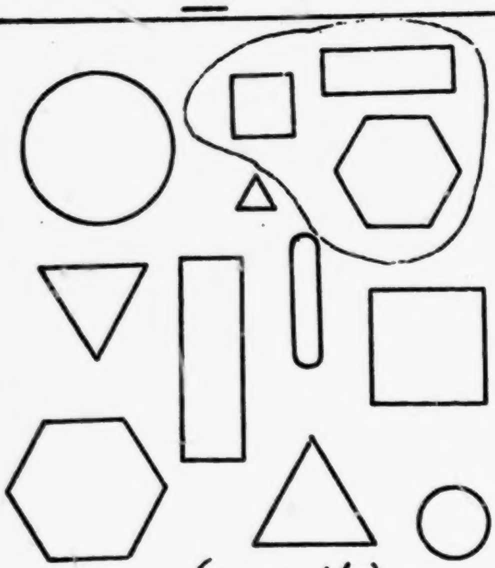


(any ½)

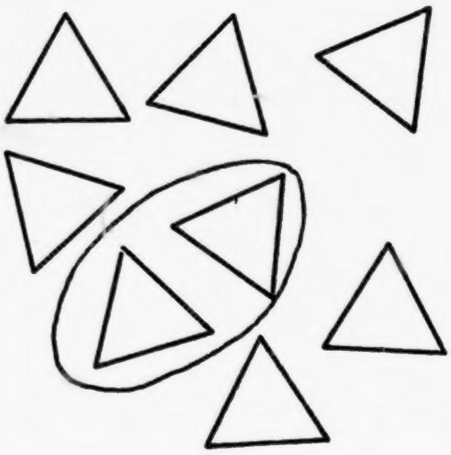


(any ½)

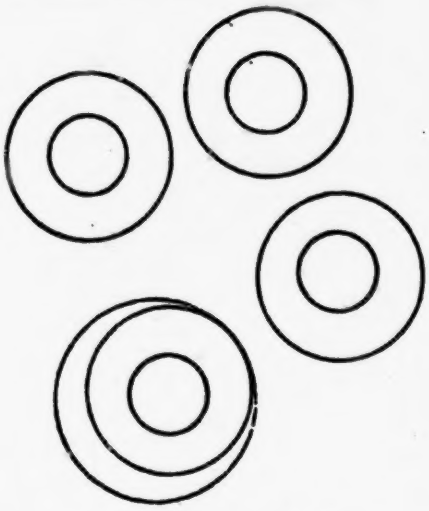
Circle $\frac{1}{4}$ of the objects in each set below.



(any ¼)

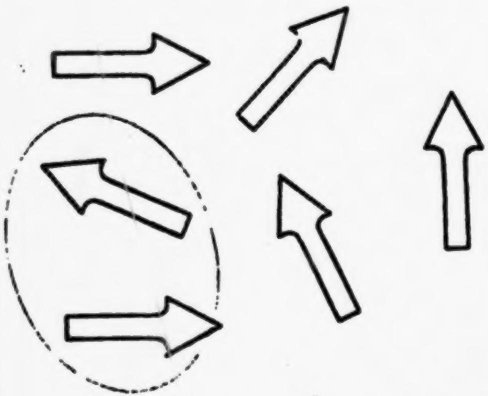


(any ¼)

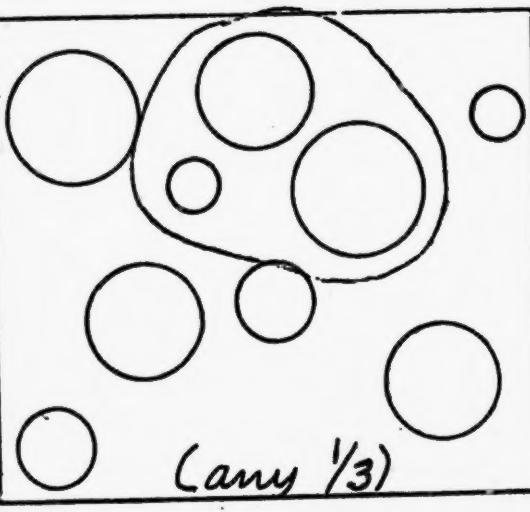


(any ¼)

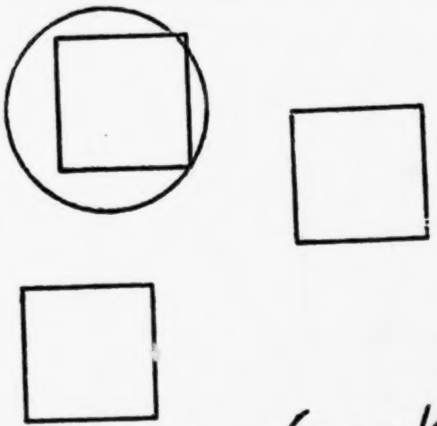
Circle $\frac{1}{3}$ of the objects in each set below.



(any ⅓)



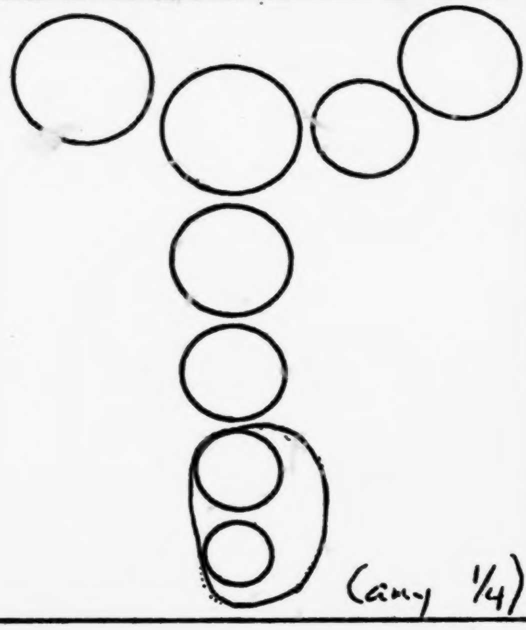
(any ⅓)



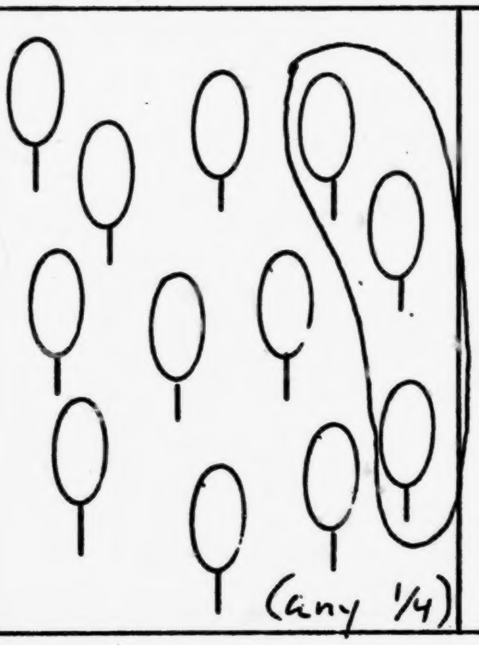
(any ⅓)

Page 12

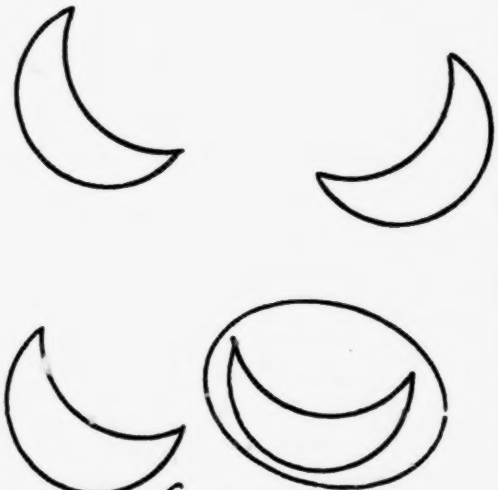
Circle one-fourth of the objects in each set below.



(any 1/4)

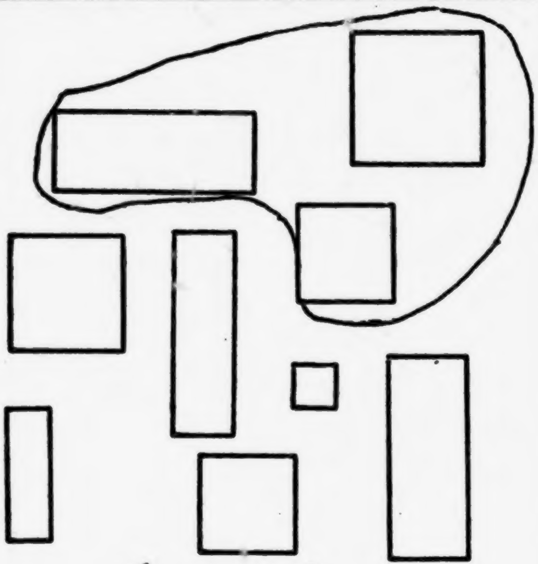


(any 1/4)

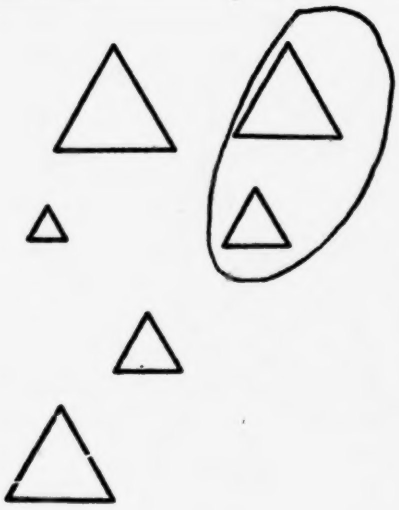


(any 1/4)

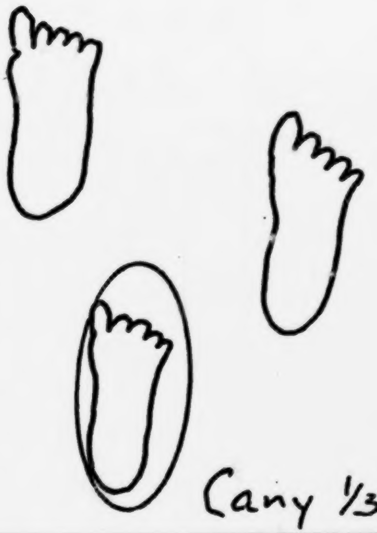
Circle one-third of the objects in each set below.



(any 1/3)

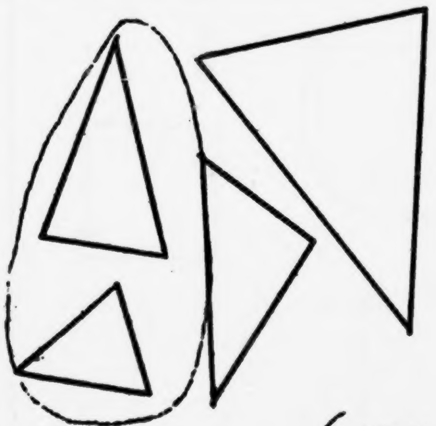


(any 1/3)

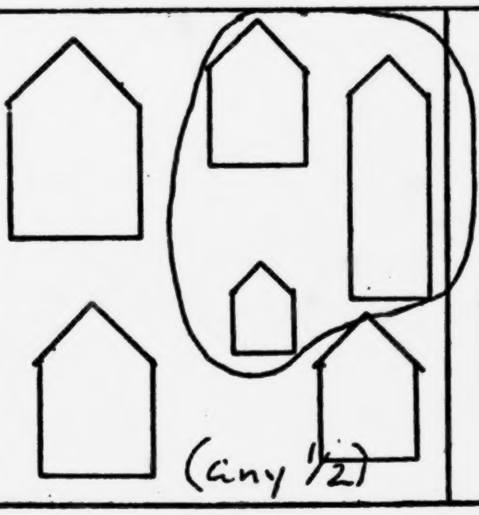


(any 1/3)

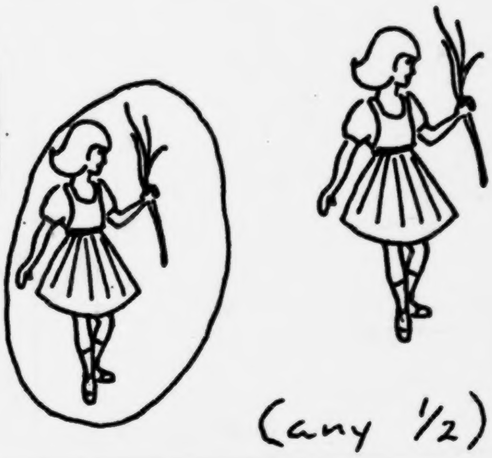
Circle one-half of the objects in each set below.



(any 1/2)



(any 1/2)

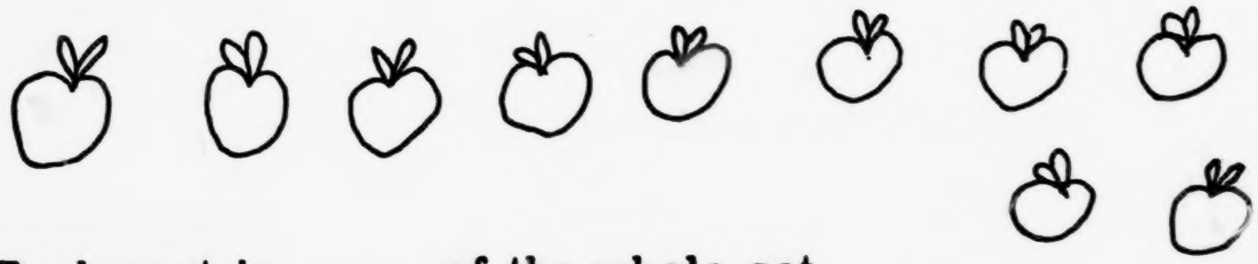


(any 1/2)

CET II

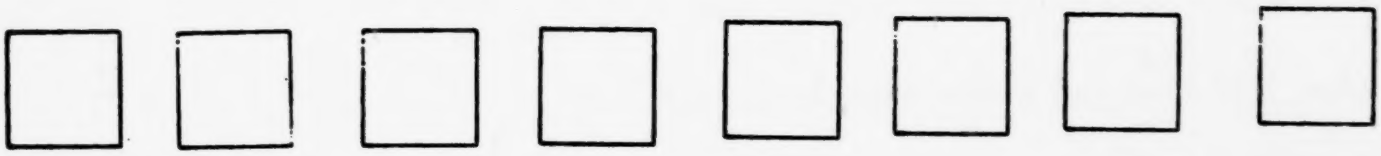
	TL. PTS.	
CIRCLE CORRECT BOX	6	100%
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

Divide the set into two equal parts.



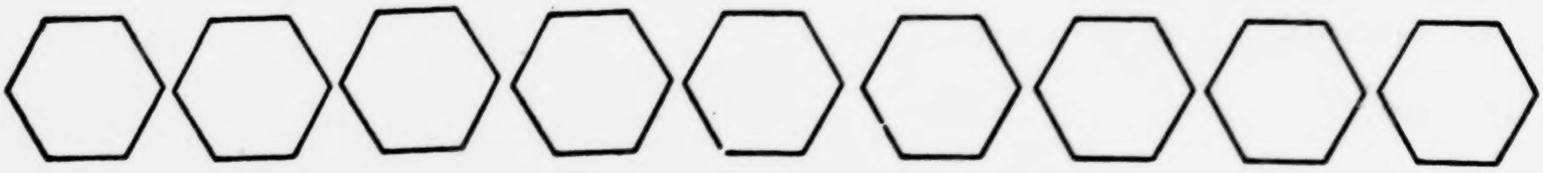
Each part is _____ of the whole set.

Divide the set into four equal parts.



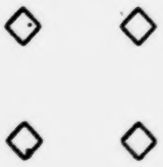
Each part is _____ of the whole set.

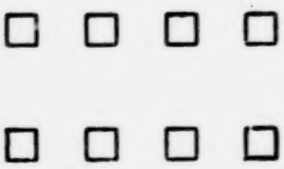
Divide the set into three equal parts.

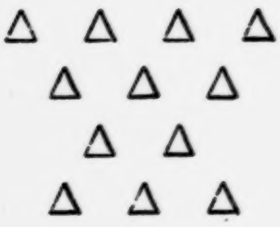


Each part is _____ of the whole set.

Draw a circle around $\frac{1}{4}$ of each set of objects.







	TL. PTS.	
CIRCLE CORRECT BOX	3	100%
	NO. OF PTS.	%
	2	67
	1	33

Page 14

LEVEL C, FRACTIONS, SKILL 4

OBJECTIVE: Divides a set of objects into two, three, or four equal parts and says that one part is now one-half, one-third, or one-fourth of the whole set.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Circles $\frac{1}{2}$ of a set and writes fraction circled.	
2.	Divides a set into 3 parts and marks $\frac{1}{3}$ with an X.	
3.	Divides a set into 4 parts and marks $\frac{1}{4}$ with an X.	
4.	Circles $\frac{1}{4}$ of a set and writes fraction circled.	
5.	Circles $\frac{1}{3}$ of a set and writes fraction circled.	
6.	Circles $\frac{1}{3}$, $\frac{1}{2}$, or $\frac{1}{4}$ of a set.	
7.	Circles fraction which describes circled portion of a set.	
8.	Circles $\frac{1}{2}$, $\frac{1}{3}$, or $\frac{1}{4}$ of a set.	11
9.	Circles $\frac{1}{2}$, $\frac{1}{3}$, or $\frac{1}{4}$ of a set.	12
10.	CET I.	
	CET II.	13

Circle pages that are to be done.

Standard Teaching Sequence, Con't

1967 - 68

Sequence No.	Prescription No.	
14R		Divides sets into halves by drawing circles. Identifies one part as one half $\left(\frac{1}{2}\right)$
15R		Divides sets into thirds. Identifies one part as one third $\left(\frac{1}{3}\right)$.
16R		Divides sets into fourths. Identifies one part as one fourth $\left(\frac{1}{4}\right)$.

Teaching Aids:

Instructo numbers and fractions
Fractional parts in circular form
Ideal Fractions Made Easy
Milton Bradley Fractions are as Easy as Pie
Felt fractional parts in a tin box.
Creative Playthings Simple Fractions Kit
Milton Bradley Fractional Parts on Board
Blocks

These are the four skill sheets completed by Joe and corrected by the Aide.

You study the scores and look at Joe's work on the skill sheets:

Joe can: Divide sets into 1/4, 1/3, 1/2 and write the fractions.

Joe cannot: - - -

Based on your analysis of Joe's work, you decide to:

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
_X_ Assign entire CET for Skill _4_.

Why? Joe's performance on these sheets indicates mastery of Skill 4.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 4, in particular) and on these skill sheets, you decide to prescribe the following on 2/16:

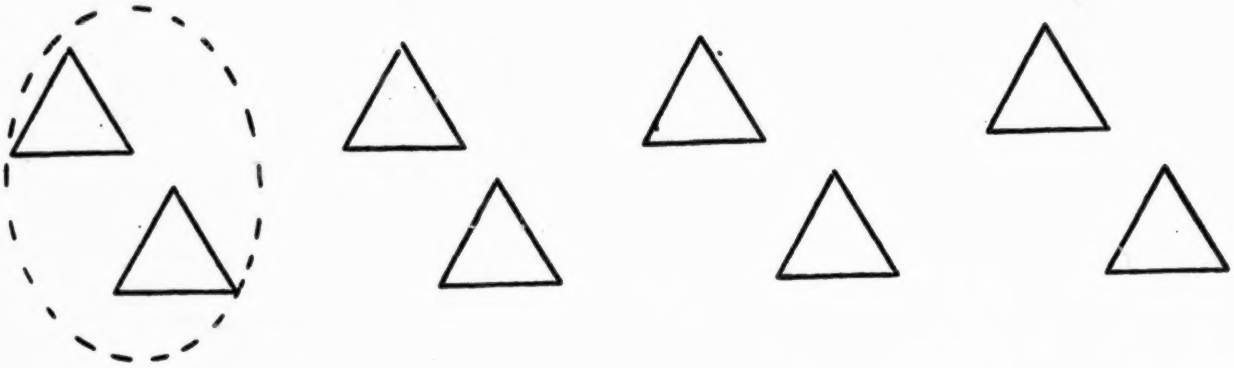
Page	Reason
10	CET to test mastery of Skill 4

You estimate the time needed as: 20 minutes maximum

After you recheck this CET, you record the page number and the date on line 13 of Joe's Prescription Sheet.

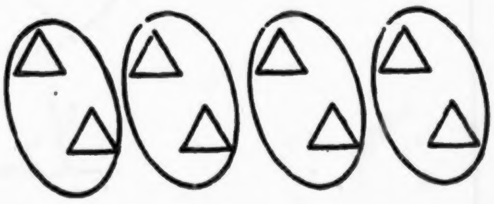
TO THE STUDENT

Draw circles to divide this set into four parts equal in number.



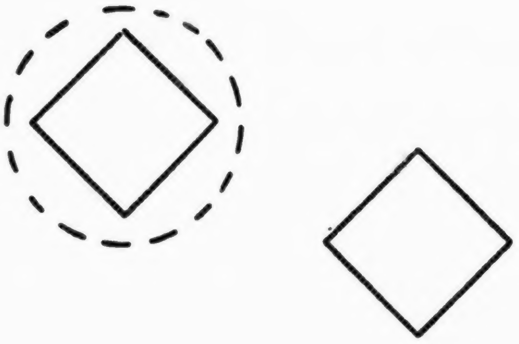
Each circle contains _____ of this set.

Answers

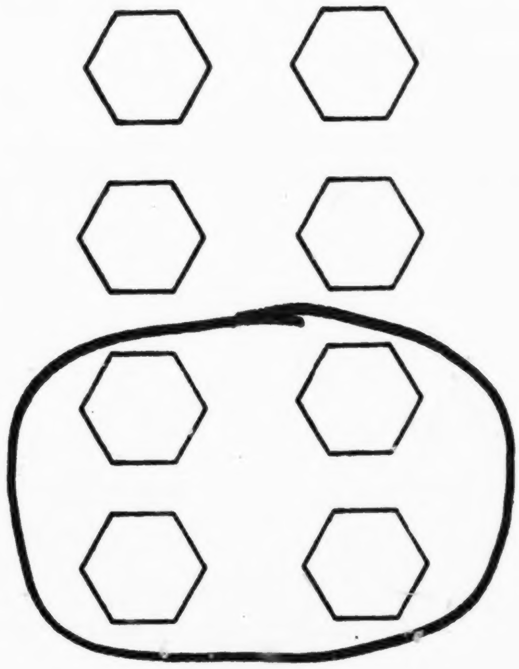


$\frac{1}{4}$

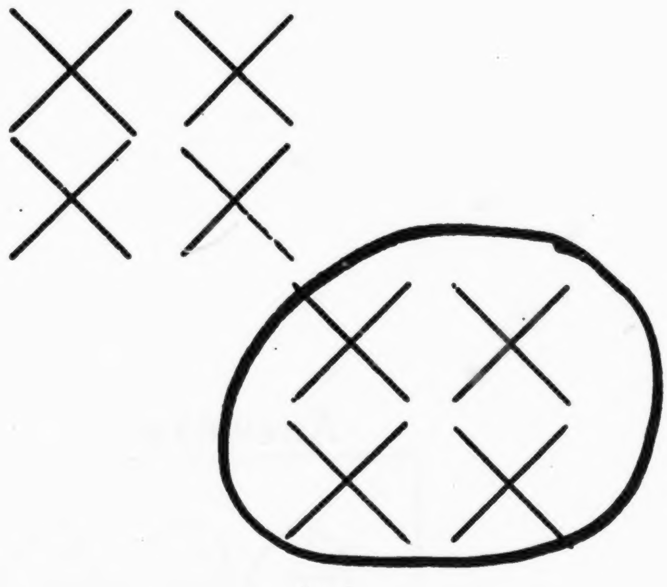
Circle one-half of each set. Write the fraction of the set you have circled in the blank.



$\frac{1}{2}$

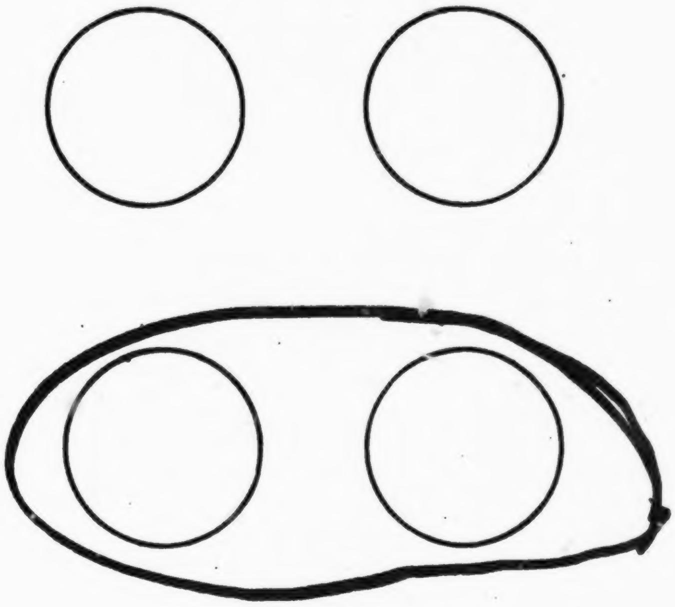


1/2



1/2

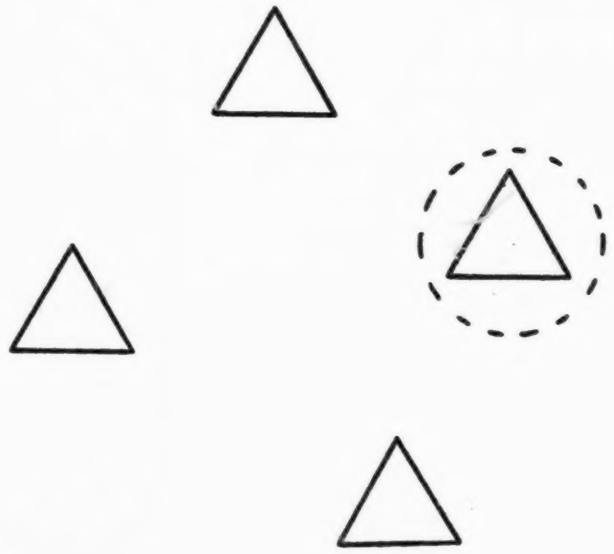
$\frac{1}{2}$ of this set has 4 things.



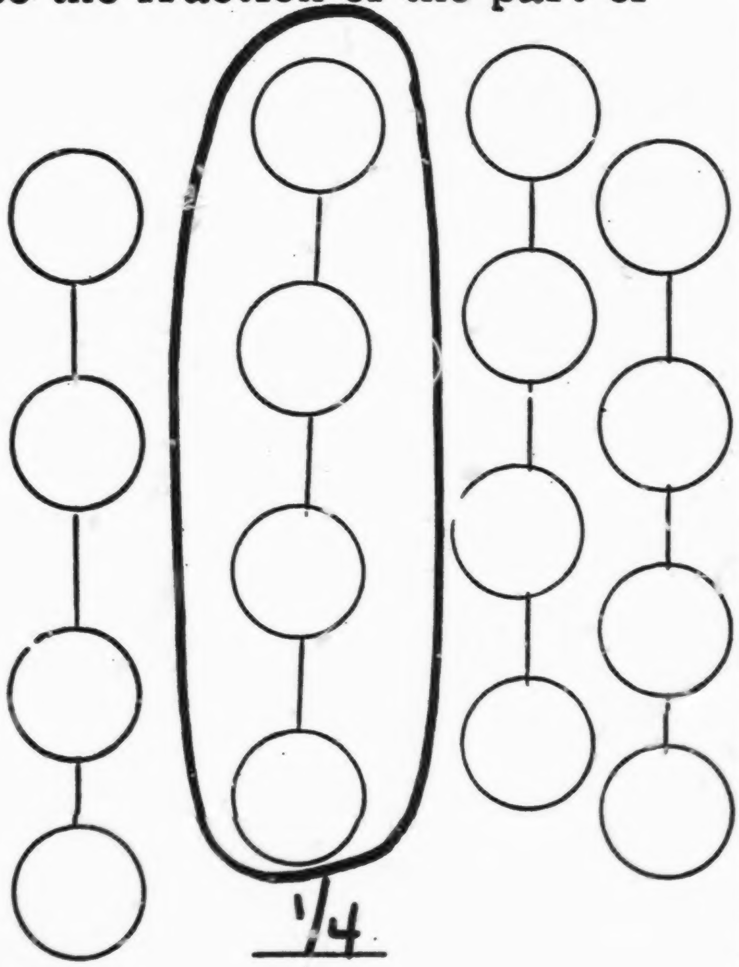
1/2

$\frac{1}{2}$ of this set has 2 things.

Circle one-fourth of each set. Write the fraction of the part of the set you circled in the blank.



1/4



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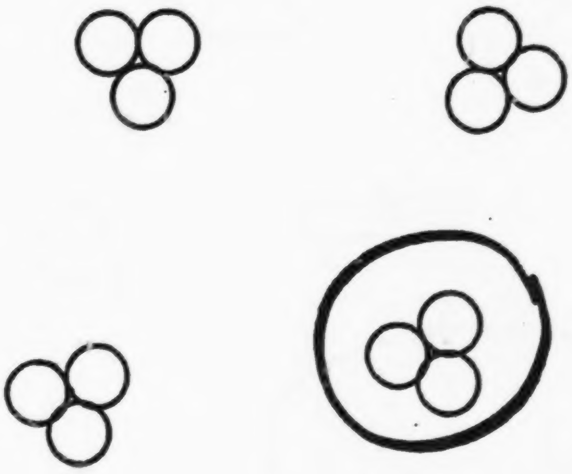
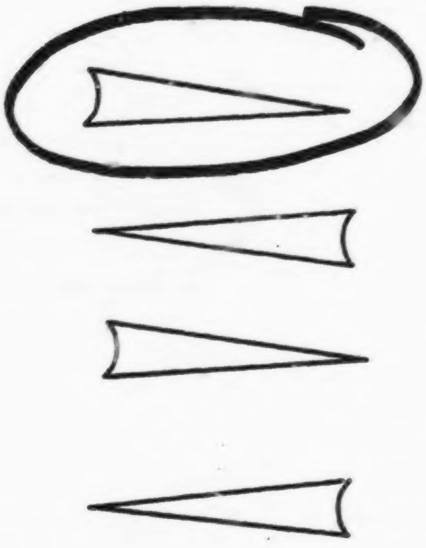


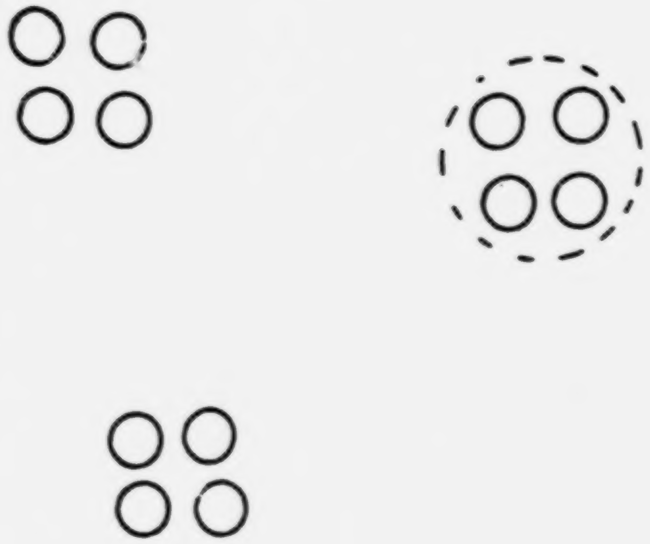
1/4



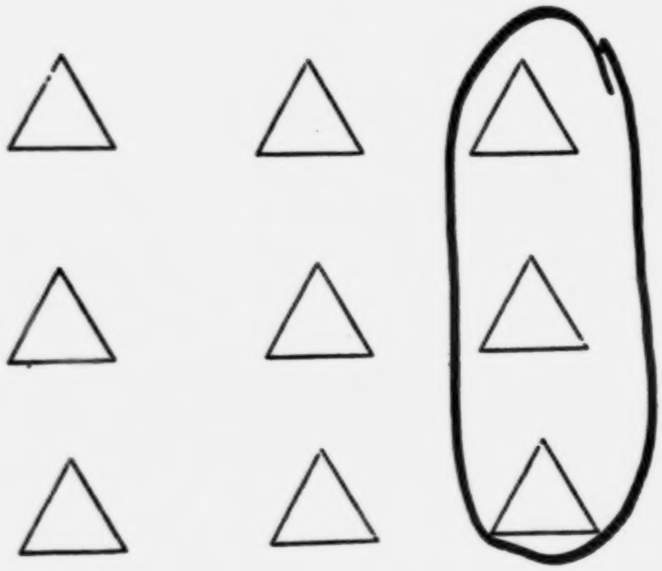
1/4

Circle one-third of each set.

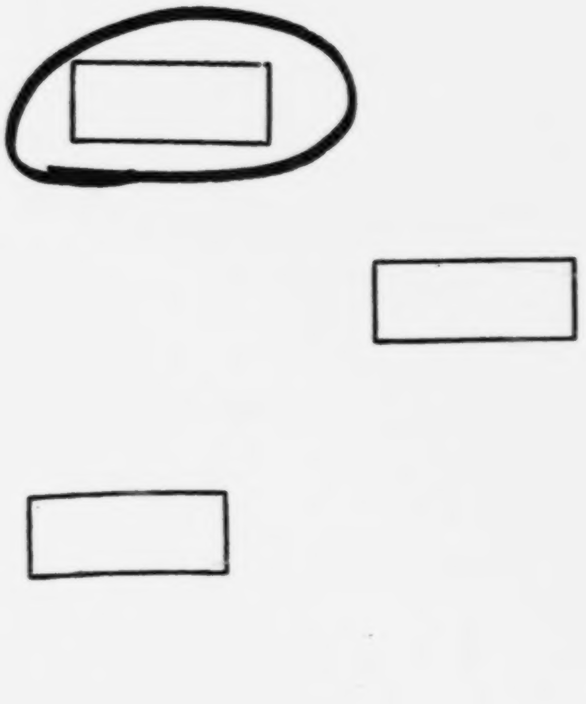
Write the fraction of the part of the set you have circled in the blank.



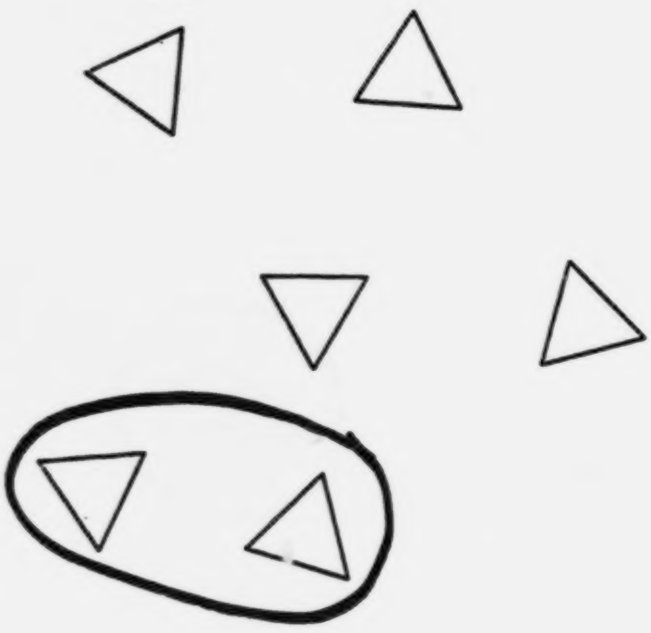
$\frac{1}{3}$



1/3



1/3



1/3

This is the CET completed by Joe and corrected by the Aide.

You record (in the role of Aide) the scores on the Prescription Sheet.

You look at Joe's work on the CET:

Joe can: PART I - Divide a set into 2, 3, or 4 equal parts and name each part as 1/2, 1/3, 1/4. PART II - Identify 1/2, 1/3, and 1/4 of a set.

Joe cannot: - - -

You describe how Joe worked with this prescription: Joe worked quickly and confidently on this CET. He was eager to demonstrate mastery of this skill.

Based on your analysis of Joe's work, you decide to:

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
__X__ Assign entire CET for Skill __5__.
_____ Assign Part II of CET for Skill ____.
_____ Write initial prescription for Skill ____.

Why? Pretest score (Skill 5) was 0% and Part 2 of CET for Skill 4 was 100%; Joe may have gained an understanding of this skill due to his prior learning.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (Skill 5, in particular) and on these skill sheets, you decide to prescribe the following on 2/16:

Page	Reason
12 P*	CET to test mastery of Skill 5

*P=CET pad

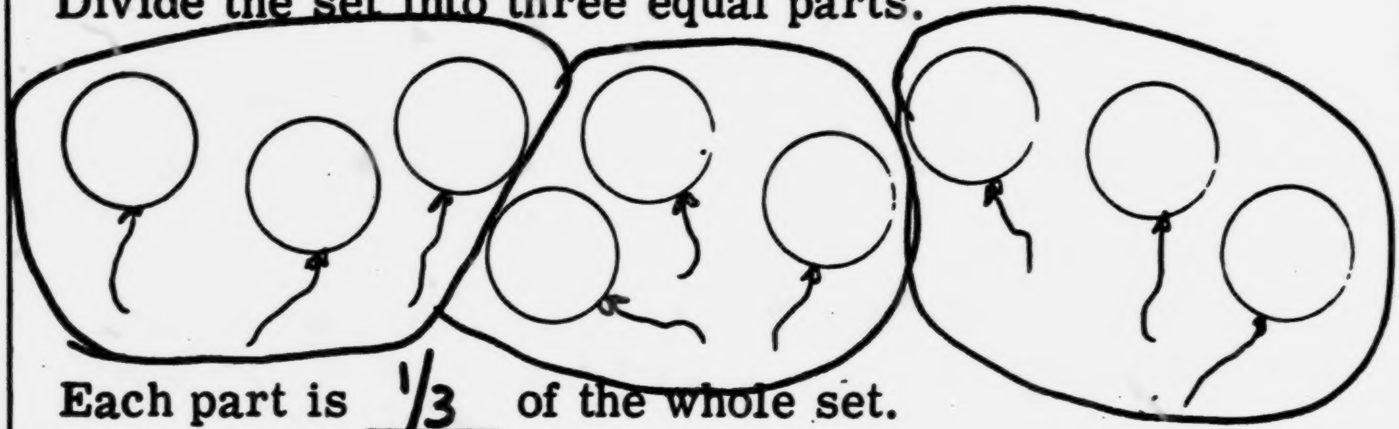
You estimate time needed as: 20 minutes maximum

After you recheck this CET, you record the page number and the date on line 14 of Joe's Prescription Sheet.

CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 6]	[✓ 100%]
	NO. OF PTS.	%
	5	83
	4	67
	3	50
	2	33
	1	17

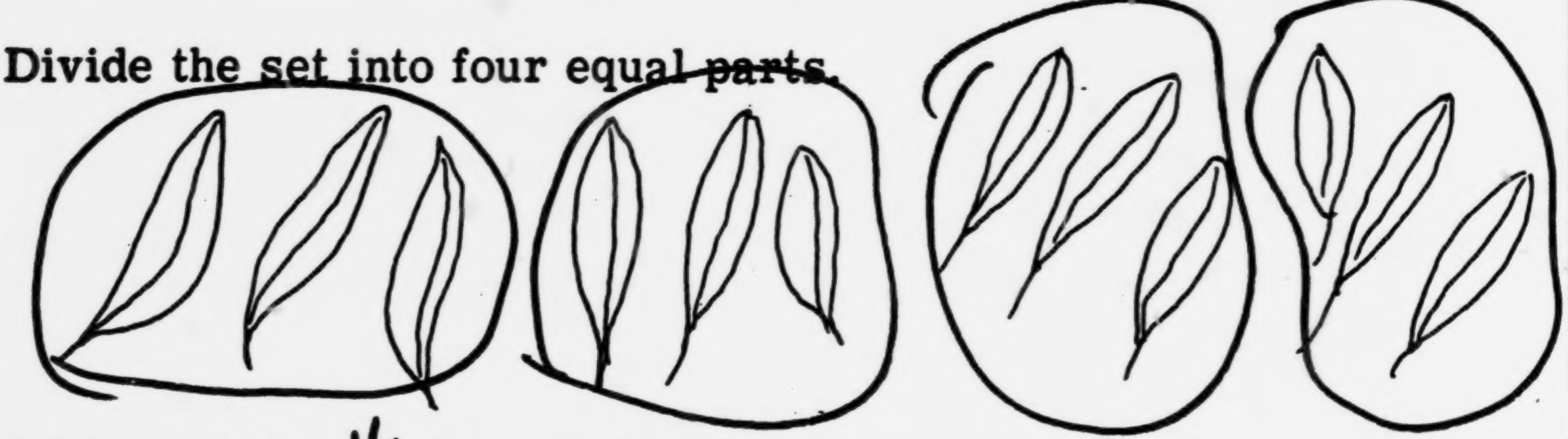
CET I

Divide the set into three equal parts.



Each part is 1/3 of the whole set.

Divide the set into four equal parts.



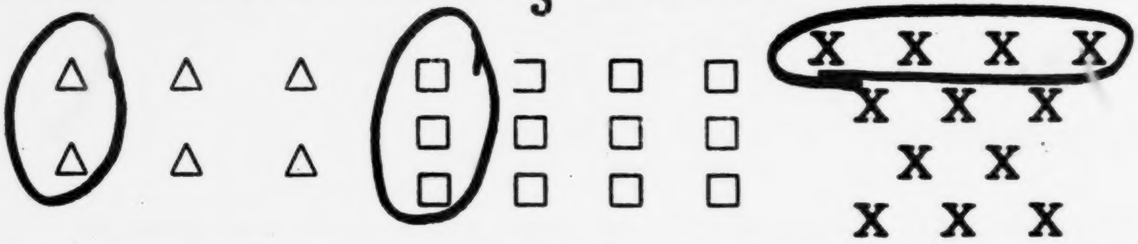
Each part is 1/4 of the whole set.

Divide the set into two equal parts.

Each part is 1/2 of the whole set.

CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 3]	[✓ 100%]
	NO. OF PTS.	%
	2	67
	1	33

Draw a circle around $\frac{1}{3}$ of each set of objects.



This is the CET completed by Joe and corrected by the Aide.

You record (in the role of Aide) the scores on the Prescription Sheet.

You look at Joe's work on the CET:

Joe can: PART I - Divide sets of objects and indicate one-fourth, one-third, one-half of each set. PART II - Note: There is no Part 2 because this is the last skill in the unit.

Joe cannot: ______________________________

You describe how Joe worked with this prescription: Joe was very confident of his ability to master this skill and worked quickly.

Based on your analysis of Joe's work, you decide to:

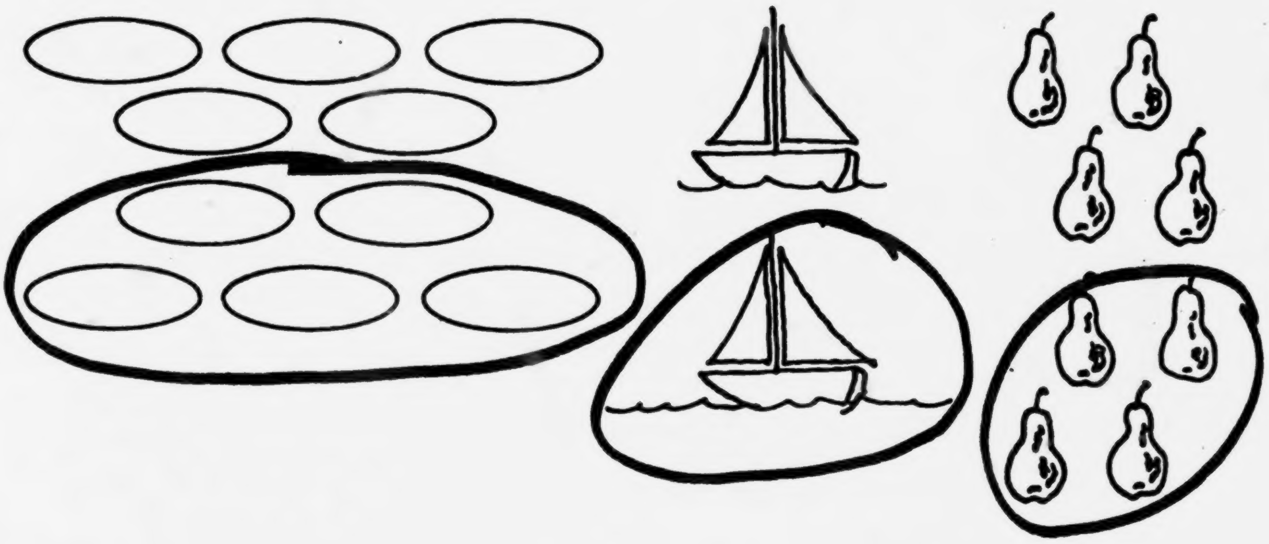
_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
_____ Assign entire CET for Skill ____.
_____ Assign Part II of CET for Skill ____.
_____ Write initial prescription for Skill ____.
__X__ Assign a posttest for unit C-Frac. .
_____ Assign the next unit pretest.

Based on your diagnosis of Joe's behavior, his performance on the Pretest (all skills) and on these skill sheets, you decide to prescribe the following on 2/16:

Prescription	Reason
Review	To enable Joe to be comfortable in the testing situation.
Posttest	To determine mastery of all skills in this unit.

CET I

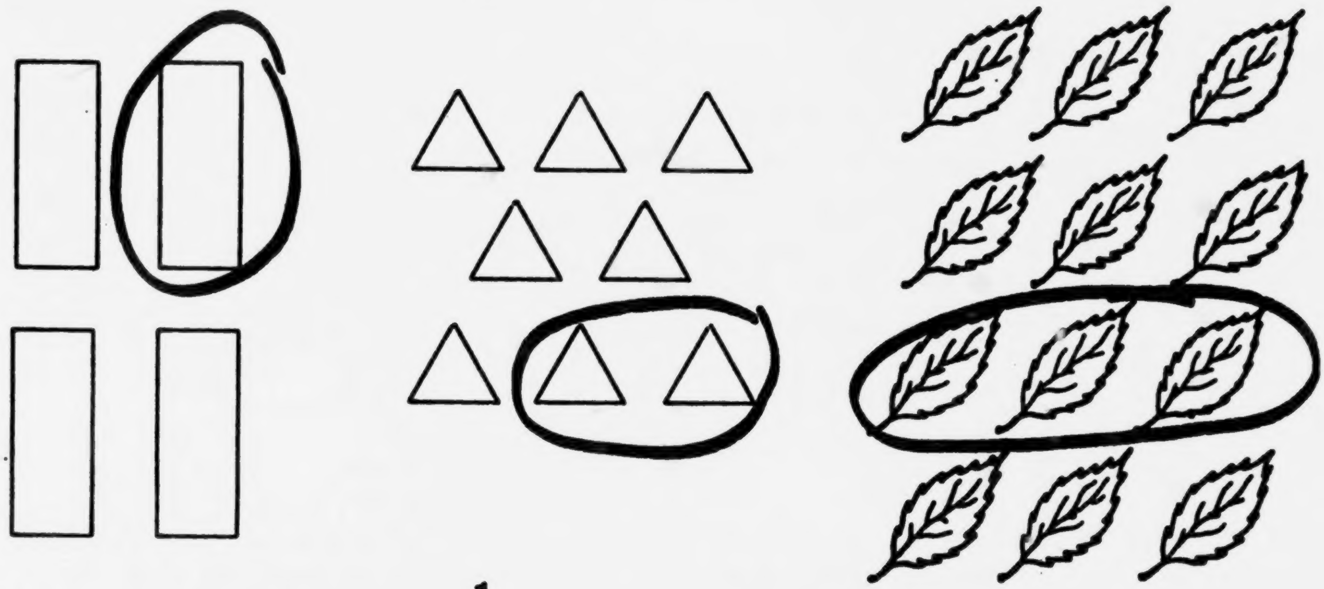
Draw a circle around $\frac{1}{2}$ of each set of objects.



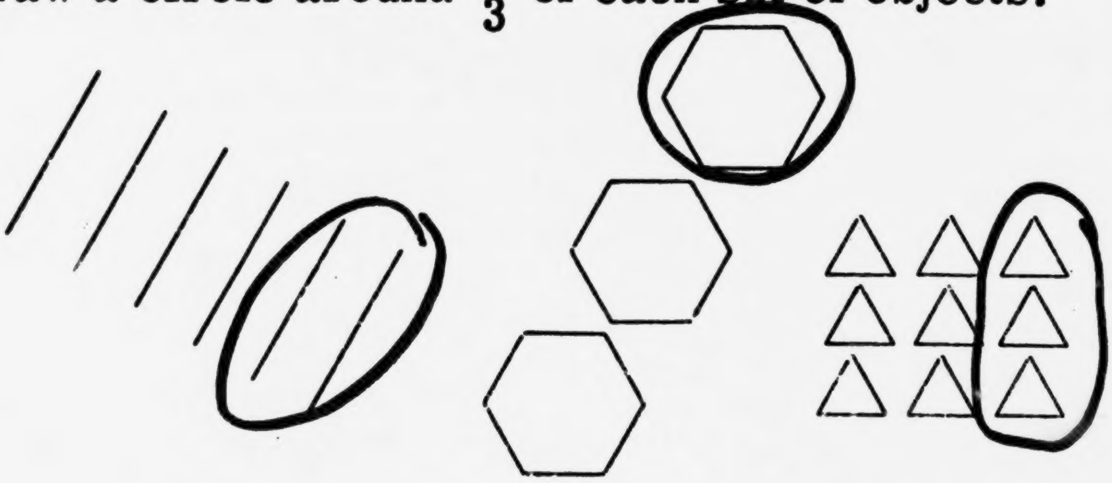
CIRCLE CORRECT BOX

TL. PTS.	
[✓ 3]	[✓ 100%]
NO. OF PTS.	%
2	67
1	33

Draw a circle around $\frac{1}{4}$ of each set of objects.



Draw a circle around $\frac{1}{3}$ of each set of objects.



This is the Posttest which has been completed by Joe and corrected by the Aide.

Turn to pages 158 and 160 for directions to the Aide.

Page 158 illustrates where the Aide records Posttest information on the Prescription Sheet.

Page 160 illustrates where the Aide records information on the Unit Test Record.

SCHOOL CODE

NAME Joe Bowen

NUMBER 0976 CLASS 3

ipi

individually prescribed instruction

MATHEMATICS

Post Test

LEVEL C

FRACTIONS (08)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

Appleton-Century-Crofts ACC Division of Meredith Publishing Company

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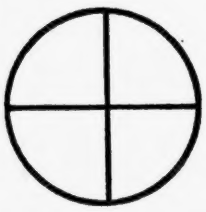
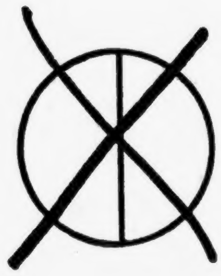
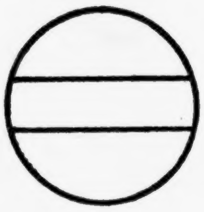
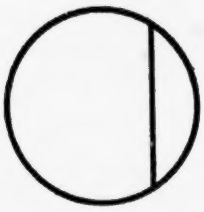
DEVELOPMENTAL EDITION

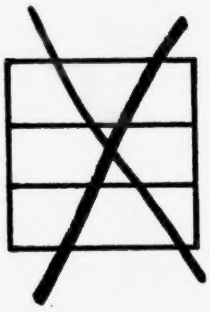
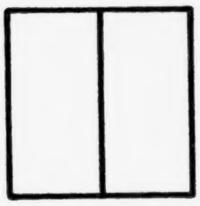
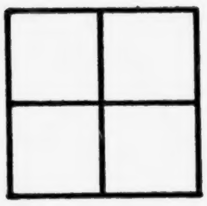
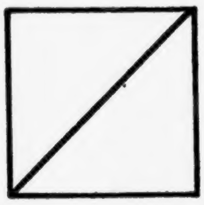
CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 5]	[✓ 100%]
	NO. OF PTS.	%
	4	80
	3	60
	2	40
	1	20

Directions: Put an X on the figure that is divided into . . .

halves

thirds

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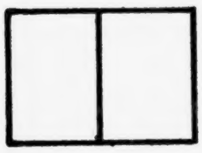
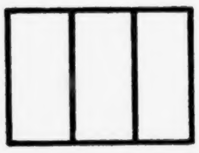
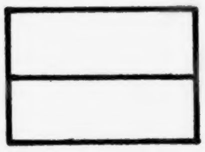
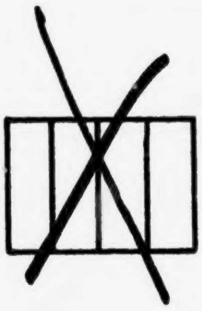
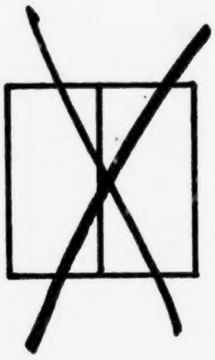
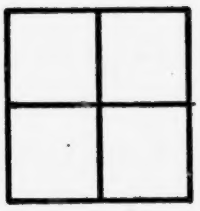
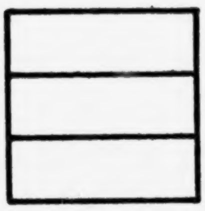
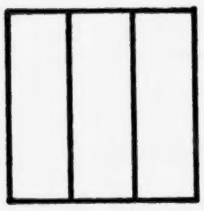
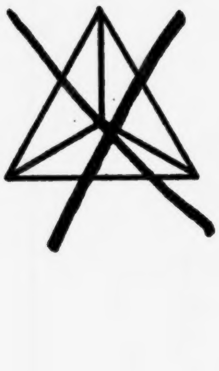
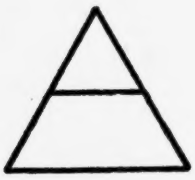
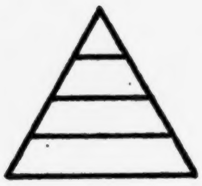
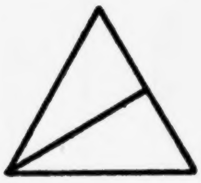





halves

thirds

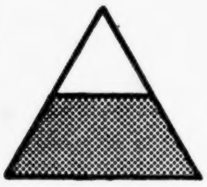
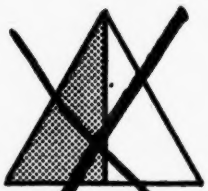
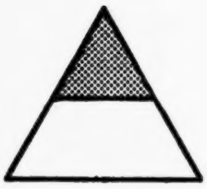





C FRACTIONS (08) POST-TEST SKILL 2

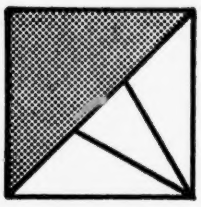
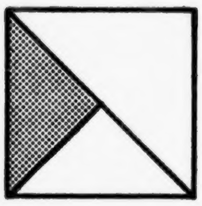
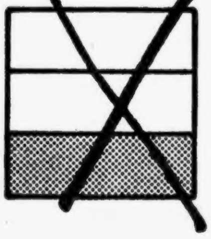
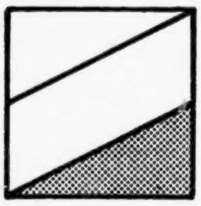
CIRCLE CORRECT BOX	TL. PTS.	
	7	100%
	NO. OF PTS.	%
	[✓ 6]	[✓ 86]
	5	71
	4	57
	3	43
	2	29
	1	14

Directions: Put an X on the figure which is shaded to match the printed fraction.

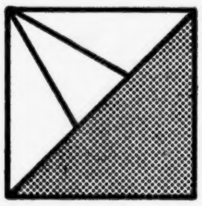
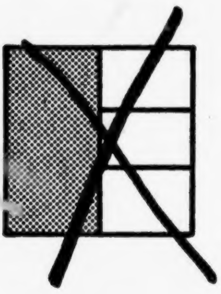
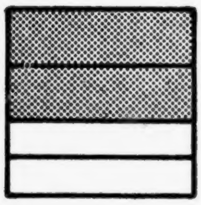
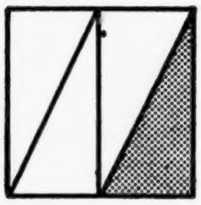
$\frac{1}{2}$

$\frac{1}{3}$

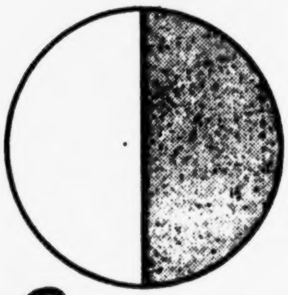
$\frac{1}{4}$

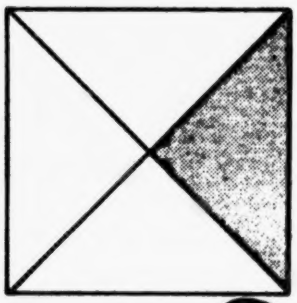
Directions: Fill in the blank.

One-fourth means one of 4 equal parts.

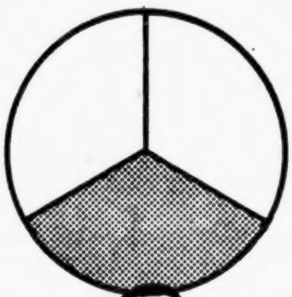
Directions: Draw a circle around the fraction that tells what part of the figure is shaded.



[✓ $\frac{1}{2}$] $\frac{1}{3}$ $\frac{1}{4}$



$\frac{1}{2}$ $\frac{1}{3}$ [✓ $\frac{1}{4}$]



$\frac{1}{2}$ [✓ $\frac{1}{3}$] $\frac{1}{4}$

C FRACTIONS (08) POST-TEST

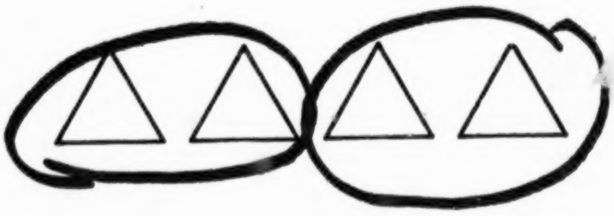
SKILL 3

CIRCLE CORRECT BOX

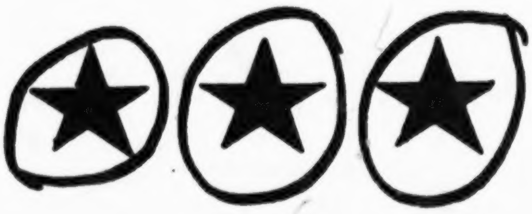
TL. PTS.	
5	100%
NO. OF PTS.	%
[✓ 4]	[✓ 80]
3	60
2	40
1	20

Directions: Circle the parts of each row that will divide the row into . . .

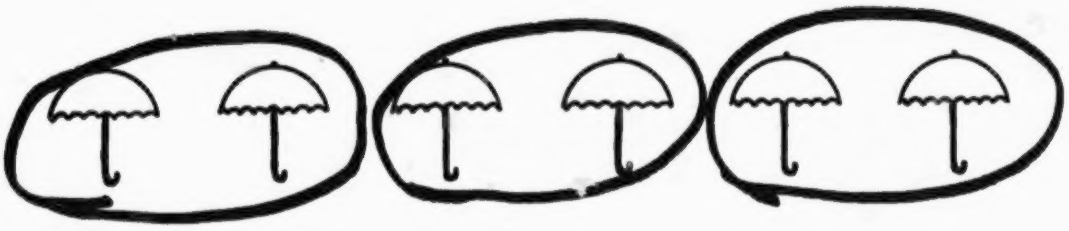
halves



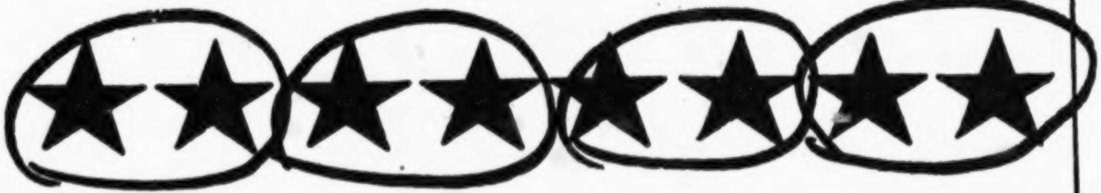
thirds



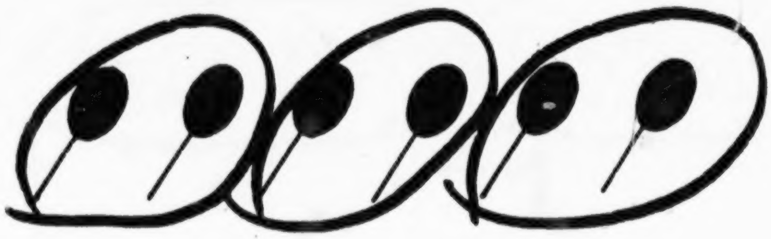
X halves



fourths



thirds

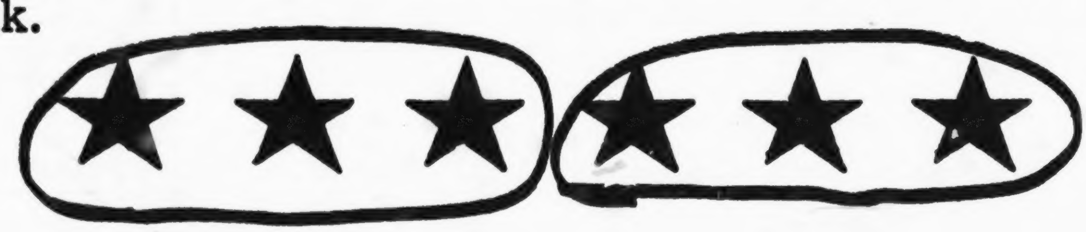


C FRACTIONS (08) POST-TEST SKILL 4

CIRCLE CORRECT BOX

TL. PTS.	
5	100%
NO. OF PTS.	%
[✓ 4]	[✓ 80]
3	60
2	40
1	20

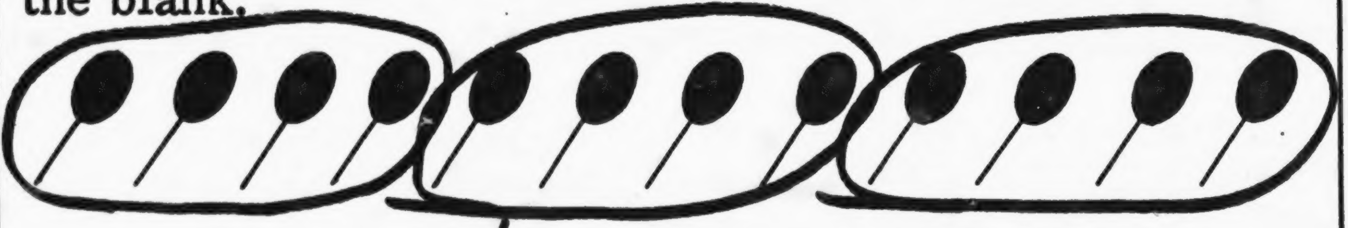
Directions: Divide the set of stars below into two equal parts. Circle each of the parts. Fill in the blank.



Each part is what fraction of the total set?

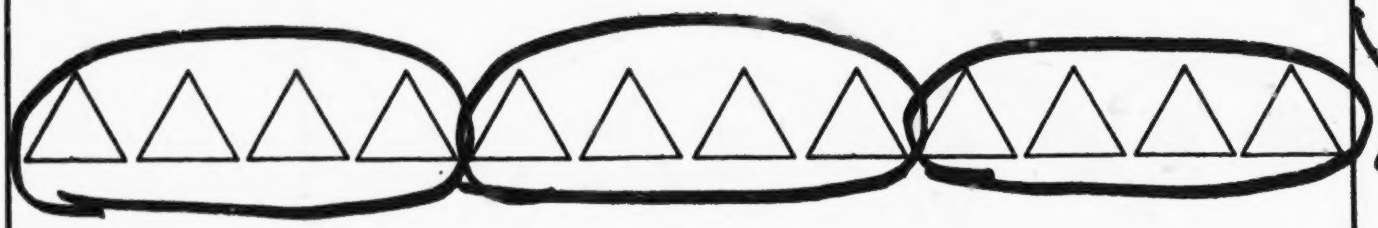
1/2

Directions: Divide the set of lollypops below into three equal parts. Circle each of the parts. Fill in the blank.



Each part is 1/3 of the total set.

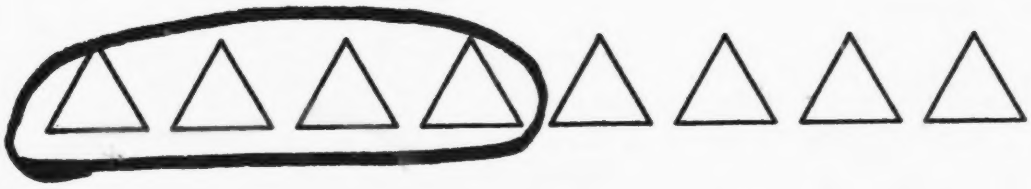
Directions: Divide the set of triangles below into four equal parts.



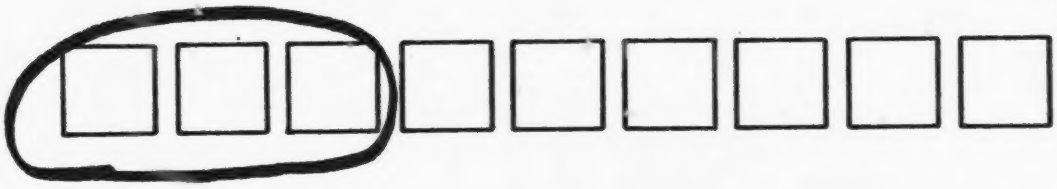
C I R C L E C O R R E C T B O X	TL. PTS.	
	5	100%
	NO. OF PTS.	%
	[✓ 4]	[✓ 80]
	3	60
	2	40
	1	20

Directions: Circle one part of each set which is equal to the fraction shown.

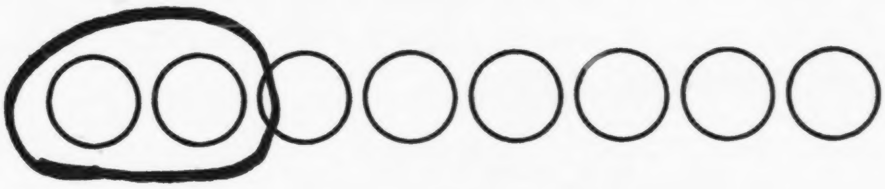
$\frac{1}{2}$



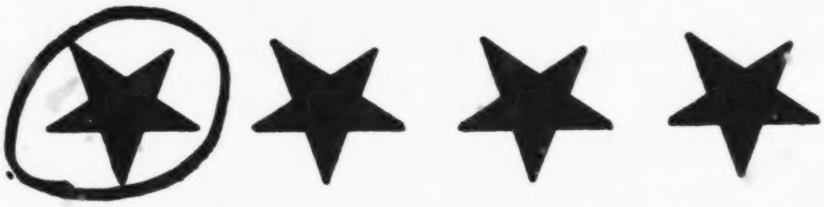
$\frac{1}{3}$



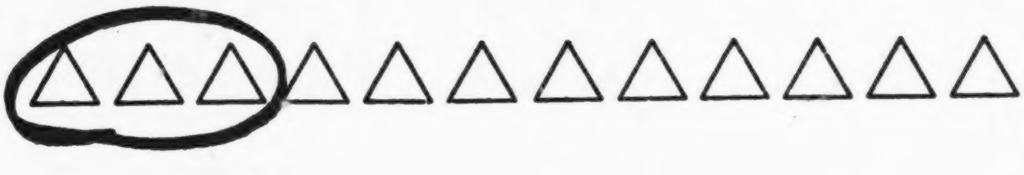
$\frac{1}{4}$



$\frac{1}{4}$



$\frac{1}{3}$



MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF

SCHOOL STAMP U. S. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER 0 9 7 6 (U. S. 4 5 6 7)

GRADE 3 (U. S. 9)

ROOM 107

UNIT C- Frac. 1,2,3,5 (U. S. 10 11 12)

UNIT DATES		
UNIT BEGAN	2/1	U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	2/1	MB	Pretest											
2	2/2	MB	1	Read Student Page										
3				4										
4				5									1	
5				6										
6					12 Fraction Pie									
7					02 Mark S.								2	
	2/4	MB	1	16										
9				17										
10	2/4	MB	1	11	CET			17/17	100	3/3	100		3	
11	2/5	MB	2	14D	CET			17/17	100	1/2	50		1	
12	2/5	MB	3	Read Student Page										
13				22R	09									
14				23R									1	
15				4										
16				6	02									
17.				8	Mark S.								2	
18	2/10	MB	3	14	CET			5/6	83	1/2	50			

AIDE

Scores and records posttest information on the Prescription Sheet:

a. Maximum points per skill

b. Student's points per skill

c. Percentages per skill

d. Average score and percentage

e. Date corrected (2/17)

PRE AND POST TEST SCORES										
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X ①	5	4	80	5	100				
X									
X ②	7	4	57	6	86				
X									
X ③	5	2	40	4	80	TJ			
X									
X 4	5	5	100	4	80	TJ			
X									
X ⑤	7	0	0	4	80	TJ			
X									
X									
X									
X									
X									

Based upon prototype originated by the Learning Research and Development Center.
As field tested by Research for Better Schools, Inc.

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MATHEMATICS

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DIVISION OF MEREDITH PUBLISHING COMPANY
440 Park Avenue South, New York, N. Y. 10016

MATHEMATICS UNIT TEST RECORD

NAME Joe Bowen
NUMBER 0976
CLASS 3

NUMERATION (01)		Level B						Level C						Level						Level						Level					
		1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post				1-Pre-2		Post			
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
	Max.Pts.	18/24		21/24				35/50		45/50																					
PLACED AT LEVEL B	Score	75%		88				70		90																					
	Date	9/21		10/1				11/1		11/21																					
PLACE VALUE (02)		Level B						Level C						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
	Max.Pts.	14/22		20/22				24/31		27/31																					
PLACED AT LEVEL B	Score	64		91				77		87																					
	Date	10/2		10/15				11/22		12/14																					
ADDITION (03)		Level						Level C						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
	Max.Pts.							40/57		55/57																					
PLACED AT LEVEL C	Score							70		96																					
	Date							12/5		1/8																					
SUBTRACTION (04)		Level						Level C						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
	Max.Pts.							50/60		55/60																					
PLACED AT LEVEL C	Score							83		92																					
	Date							1/9		1/31																					
MULTIPLICATION (05)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														
DIVISION (06)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														
COMBINATION OF PROCESSES (07)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														

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UPDATE AND PLACE IN STUDENT FOLDER.

Based upon prototype originated by the Learning Research and Development Center.
As field tested by Research for Better Schools, Inc.

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MATHEMATICS

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440 Park Avenue South, New York, N. Y. 10016

MATHEMATICS UNIT TEST RECORD

NAME Joe Bowen

NUMBER 0976

CLASS 3

FRACTIONS (08)		Level	Post				Level	Post				Level	Post				Level	Post				Level	Post			
		1-Pre-2	1	2	3	4	1-Pre-2	1	2	3	4	1-Pre-2	1	2	3	4	1-Pre-2	1	2	3	4	1-Pre-2	1	2	3	4
	Max.Pts.																									
PLACED AT LEVEL	Score																									
	Date																									
MONEY (09)		Level	1	2	3	4	Level	1	2	3	4	Level					Level				4	Level	1	2	3	4
	Max.Pts.																									
PLACED AT LEVEL	Score																									
	Date																									
TIME (10)		Level	1	2	3	4	Level	1	2	3	4	Le									4	Level	1	2	3	4
	Max.Pts.																									
PLACED AT LEVEL	Score																									
	Date																									
SYSTEMS OF MEASUREMENT (11)		Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4
	Max.Pts.																									
PLACED AT LEVEL	Score																									
	Date																									
GEOMETRY (12)		Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4
	Max.Pts.																									
PLACED AT LEVEL	Score																									
	Date																									
SPECIAL TOPICS (13)		Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4
	Max.Pts.																									
PLACED AT LEVEL	Score																									
	Date																									
ADDITION AND SUBTRACTION (34)		Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4	Level	1	2	3	4
	Max.Pts.																									
PLACED AT LEVEL	Score																									
	Date																									

The Aide will enter Pretest information on the Unit Test Record:

a. Level...............C
b. Maximum Points...15/29
c. Score.............51%
d. Date Pretest corrected..2/1

UPDATE AND PLACE IN STUDENT FOLDER.

You examine the entire Posttest (starting on page152).

You note the skills in the unit that are below mastery (under 85%).

You make a general statement about Joe's performance in each of these skills:

Joe can: Identify, divide and name fractional parts of sets using fractions 1/4, 1/3, 1/2 when pictures clues are presented.

Joe cannot: Identify and divide sets into 1/4, 1/3, 1/2 with consistent accuracy.

You describe how Joe worked with this prescription: Joe didn't indicate any difficulty while completing this test. He worked independently on the entire test.

Based on your analysis of Joe's behavior, his performance in the unit materials and his growth as evidenced in his work in this unit, you decide to accept Joe's 85% Pretest result as unit mastery.

The Prescription Sheet on page 162 illustrates

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF

Mastery MB

SCHOOL STAMP U. S. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER 0 9 7 6
U. S. 4 5 6 7

GRADE 3 U. S. 9

ROOM 107

UNIT C-Frac. 1,2,3,5 U. S. 10 11 12

UNIT DATES		
UNIT BEGAN	2/1	U. 13-16
UNIT ENDED	2/17	U. 17-20
DAYS WORKED*		U. 21-22

You write "Mastery" and your initials at the top of Prescription Sheet #1.

	SKILL BOOKLETS							CURRICULUM TEST PART 1		CURRICULUM TEST PART 2		SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75		S. 76-77	
1	2/1	MB	Pretest											
2	2/2	MB	1	Read Student Page										
3				4										
4				5									1	
5				6										
6					12	Fraction Pies								
7					02	Mark S.							2	
	2/4	MB	1	16										
9				17										
10	2/4	MB	1	11	CET			17/17	100	3/3	100		3	
11	2/5	MB	2	14D	CET			17/17	100	1/2	50		1	
12	2/5	MB	3	Read Student Page										
13				22R	09									
14				23R									1	
15				4										
16				6	02									
17.				8	Mark S.									
18	2/10	MB	3	14	CET									

You indicate mastery of Skills 3, 4, 5 by writing "TJ" next to those skills in the Posttest Scores box.

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW
U. & S. 79

UNIT CARD: "U" IN COLUMN 80

KEYPUNCH SAMPLE

KILL	PRE %	POST. %
29-31	U. 32-33	U. 34-35
01	80	95

TO 78

PRE AND POST TEST SCORES

ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X ①	5	4	80	5	100				
X									
X ②	7	4	57	6	86				
X									
X ③	5	2	40	4	80	TJ			
X									
X 4	5	5	100	4	80	TJ			
X									
X ⑤	7	0	0	4	80	TJ			
X									
X									
X									
X									
X									
X									
X	29	15	51%	23	85%				
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: 2 OF 2

SCHOOL STAMP U. S. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER 0 9 7
U. S. 4 5 6 7

GRADE 3 U. S. 9

ROOM 107

UNIT C-Frac. U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	2/10	MB	3	1		3	4							
2				2		3	4						3	
3				15		7	8							
4				9		3	6							
5				11		7	7						4	
6	2/12	MB	3	Blocks	12									
7				Teacher Page	03	4	4							
8	2/12	MB	3	19	CET			6/6	100	1/2	50		5	
9	2/15	MB	4	Read Student Page										
10				1										
11				4										
12				5									1	
13	2/16	MB	4	10	CET								2	
14	2/16	MB	5	12P	CET								1	
15	2/16	MB		Review										
.16			Posttest											
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

H SAMPLE
E % 32-33 80
POST. % U. 34-35 95
TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

The Prescription Sheet on page 165 illustrates how the Aide completes the necessary data at the end of a student's mastered unit.

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF 2

SCHOOL STAMP	U. S. 2-3
STUDENT NAME	Joe Bowen
STUDENT NUMBER	0 9 7 6
U. S.	4 5 6 7
GRADE	3
U. S.	9
ROOM	107
UNIT	C-Frac. 1, 2, 3, 5
U. S.	10 11 12

UNIT DATES		
UNIT BEGAN	2/1	U. 13-16
UNIT ENDED	2/17	U. 17-20
DAYS WORKED*	12	U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

AIDE

Completes data information at the top of the Prescription Sheet:

a. Days worked (total of "Days Worked in Skill" column)

b. Number Prescription Sheets (1 of 2, 2 of 2, etc.)

	S.						TS	CURRICULUM TEST PART 1 SCORE	% S. 72-73	PART 2 SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1														
2							ge							15
3														
4													1	
5														
6					12	Fraction Pie								
7					02	Mark S.							2	
8	2/4	MB	1	16										17
9				17										
10	2/4	MB	1	11	CET			17/17	100	3/3	100		3	19
11	2/5	MB	2	14D	CET			7/7	100	1/2	50		1	21
12	2/5	MB	3	Read Student Page										
13				22R	09									25
14				23R									1	
15				4										
16				6	02									
17				8	Marks.								2	
18	2/10	MB	3	14	CET			5/6	83	1/2	50			27

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW

PUNCH SAMPLE

PRE % U. 32-33	POST. % U. 34-35
80	95

TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER ▼	ENTER POINTS PER SKILL	PRE	% ▼	POST	% ▼	POST	% ▼	POST	% ▼
X ①	5	4	80	5	100				
X									
X ②	7	4	57	6	86				
X									
X ③	5	2	40	4	80	TJ			
X									
X 4	5	5	100	4	80	TJ			
X									
X ⑤	7	0	0	4	80	TJ			
X									
X									
X									
X									
X									
X									

The reference pages in the "notes" column of the Prescription Sheets on pages 167-8 are the pages in this package where that particular prescription was developed.

You should use these page references for review or for clarification of a particular procedure in the development of Joe's prescription.

MATHEMATICS PRESCRIPTION SHEET

Mastery
MB

PAGE: 1 OF 2.

SCHOOL STAMP | U. S. 2-3

STUDENT NAME	Joe Bowen	STUDENT NUMBER	0	9	7	6
		U. S.	4	5	6	7

GRADE 3 (U. S. 9) ROOM 107 UNIT C-Frac. 1,2,3,5 (U. S. 10 11 12)

UNIT DATES		
UNIT BEGAN	2/1	U. 13-16
UNIT ENDED	2/17	U. 17-20
DAYS WORKED*	12	U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	2/1	MB		Pretest										
2	2/2	MB	1	Read Student Page										45
3				4		4	4							
4				5		8	10						1	
5				6		5	10							
6					12	Fraction Pies								
7					02	Mark S.							2	
8	2/4	MB	1	16		5	5							69
9				17		5	5							
10	2/4	MB	1	11	CET			17/17	100	3/3	100		3/	74
11	2/5	MB	2	14P	CET			7/7	100	1/2	50		1/	77
12	2/5	MB	3	Read Student Page										
13				22R	09									81
14				23R	09								1	
15				4		4	4							
16				6	02	4	4							
17.				8	Mark S.	6	6						2	
18	2/10	MB	3	14	CET			5/6	83	1/2	50			105

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

H SAMPLE
E % 32-33 30
POST. % U. 34-35 95
TO 7.8

PRE AND POST TEST SCORES										
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X ①	5	4	80	5	100				
X									
X ②	7	4	57	6	86				
X									
X ③	5	2	40	4	80	TJ			
X									
X 4	5	5	100	4	80	TJ			
X									
X ⑤	7	0	0	4	80	TJ			
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: 2 OF 2

SCHOOL STAMP U. S. 2-3

STUDENT NAME Joe Bowen

STUDENT NUMBER 0 9 7 6
U. S. 4 5 6 7

GRADE 3 U. S. 9

ROOM 107

UNIT C-Frac. U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	2/10	MB	3	1		3	4							112
2				2		3	4						3	
3				15		7	8							
4				9		3	6							
5				11		7	7						4	
6	2/12	MB	3	Blocks	12									114
7				Teacher Page	03	4	4							
8	2/12	MB	3	19	CET			6/6	100	1/2	50		5	
9	2/15	MB	4	Read Student Page										124
10				1										
11				4										
12				5									1	
13	2/16	MB	4	10	CET								2	142
14	2/16	MB	5	12P	CET								1	147
15	2/16	MB		Review										
16				Posttest										
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

SAMPLE
% 2-33 0
POST. % U. 34-35 95
TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

Section IV

DEVELOPING A PRESCRIPTION

CASE STUDY - TYPE 2

SUSAN MARKHAM

D-MULT.

This is Susan's Placement Profile.

She has worked through units B-Num., B-PV; C-Num., C-PV, C-Add., C-Sub.; D-Num., D-PV, D-Add., D-Sub.

Examine the Profile and fill in the next unit to be assigned:

ARITHMETIC PLACEMENT SCORE PROFILE

ipi
individually prescribed instruction
MATHEMATICS

HOOL STAMP	P. 2-3

STUDENT NAME Susan Markham

STUDENT NUMBER	1	2	3	4
	P-4	5	6	7

GRADE 4 P. 9

ROOM 102

KEYPUNCH SAMPLE			TO P. 78
P. 14-15	P. 16	P. 17-18	
MATH. AREA CODE	PLACED AT LEVEL	% OF PLACEMENT	
01	B	85	

MATHEMATICS AREA	DATE OF TEST	MATH AREA CODE	PLACEMENT LEVELS B—I									PLACED AT LEVEL
	P. 10-13			B	C	D	E	F	G	H	I	
NUMERATION		01	MAX. PTS.	10	10							B
			SCORE	4	2							
			%	60	20							
PLACE VALUE		02	MAX. PTS.	10	10							B
			SCORE	5	1							
			%	50	10							
ADDITION		03	MAX. PTS.		10							C
			SCORE		6							
			%		60							
SUBTRACTION		04	MAX. PTS.		10							C
			SCORE		7							
			%		70							
MULTIPLICATION		05	MAX. PTS.			10						D
			SCORE			6						
			%			60						
DIVISION		06	MAX. PTS.			10						D
			SCORE			5						
			%			50						
COMBINATION OF PROCESSES		07	MAX. PTS.		10	10						D
			SCORE		9	6						
			%		90	60						
FRACTIONS		08	MAX. PTS.		10	10						D
			SCORE		8	4						
			%		80	40						
MONEY		09	MAX. PTS.		10	10						D
			SCORE		9	5						
			%		90	50						
TIME		10	MAX. PTS.		10	10						D
			SCORE		10	4						
			%		100	40						
SYSTEMS OF MEASUREMENT		11	MAX. PTS.		10	10						D
			SCORE		8	6						
			%		80	60						
GEOMETRY		12	MAX. PTS.		10	10						D
			SCORE		10	6						
			%		100	60						
ADDITION AND SUBTRACTION		34	MAX. PTS.	10								C
			SCORE	9								
			%	90								

The next unit to be assigned is D-Mult..

Examine Susan's work on the Placement Test in D-Mult.

Remove the packet of three blank Prescription Sheets that follow the Placement Test.

Use them to record all prescriptions.

CIRCLE CORRECT BOX	TL.	PTS.
	10	100%
	NO. OF PTS.	%
	9	90
	8	80
	7	70
	[✓ 6]	[✓ 60]
	5	50
	4	40
	3	30
	2	20
	1	10

IPI Placement Test

D Multiplication (05)

NAME AND NUMBER Susan Markham - 1234

unit page 1 of 1

DATE

CLASS 4

Skill 3 — Directions: Multiply.

9	6	1	0
× 1	× 0	× 5	× 2
9	0	5	0

9 0 5 0

Skill 4 — Directions: Multiply.

3 × 7 = ______ X

4 × 5 = ______ X

2 × 6 = ______ X

3 × 4 = ______ X

21 20

12 12

Skill 8 — Directions: Read each problem. Write the answer with its label on the lines.

Bob went bowling. In each of three tries, he knocked down 6 pins. How many pins did he knock down altogether?

Answer 18 pins

18 pins

How many marbles would five boys have altogether if each boy had 4 marbles?

Answer 20marbles

20 marbles

MATHEMATICS PRESCRIPTION SHEET

PAGE: ▨ OF

SCHOOL STAMP	U. S. 2-3

STUDENT NAME	▨				
STUDENT NUMBER	U. S.	4	5	6	7

GRADE	U. S.	9	ROOM	▨	UNIT		U. S.	10	11	12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		▨

	SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE PRES. ➤	PRES. INIT. ➤	SKILL NO. ➤	↓ PAGE NO.	↓ INST. TECH CODES	SCORE	MAX. POINTS	PART 1		PART 2				
								SCORE	%	SCORE	%			
	S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71	▨	▨		S. 72-73		S. 74-75	▨	S. 76-77	
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

INCH SAMPLE

PRE %	POST. %
U. 32-33	U. 34-35 TO 78
80	95

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER ▼	ENTER POINTS PER SKILL	PRE	% ▼	POST	% ▼	POST	% ▼	POST	% ▼
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF

SCHOOL STAMP	U. S. 2-3	STUDENT NAME	STUDENT NUMBER	U. S. 4 5 6 7
GRADE	U. S. 9	ROOM	UNIT	U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST				SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE PRES.	PRES. INIT.	SKILL NO.	PAGE NO.	INST. TECH CODES	SCORE	MAX. POINTS	PART 1		PART 2				
								SCORE	%	SCORE	%			
	S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71				S. 72-73		S. 74-75		S. 76-77	
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

NCH SAMPLE

PRE %	POST. %
J. 32-33	U. 34-35
80	95

TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER ▼	ENTER POINTS PER SKILL	PRE	% ▼	POST	% ▼	POST	% ▼	POST	% ▼
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: ▨ OF ▨

SCHOOL STAMP U. S. 2-3

STUDENT NAME ▨

STUDENT NUMBER U. S. 4 5 6 7

GRADE U. S. 9

ROOM ▨

UNIT U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		▨

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE ▨	MAX. POINTS ▨	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT. ▨	DAYS* WORKED IN SKILL S. 76-77	NOTES
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

NCH SAMPLE

PRE %	POST %
. 32-33	U. 34-35
80	95

TO 78

PRE AND POST TEST SCORES										
ENTER SKILL NUMBER ▼	ENTER POINTS PER SKILL	PRE	% ▼	POST	% ▼	POST	% ▼	POST	% ▼
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF

HOOL STAMP U. S. 2-3

STUDENT NAME

STUDENT NUMBER				
U. S.	4	5	6	7

GRADE U. S. 9

ROOM

UNIT U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1														
2														
3														
4														
5														
6														
7														
8														
9														
11														
12														
13														
14														
15														
16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
2	OTHERS

OVERFLOW

UNCH SAMPLE		
PRE % U. 32-33	POST. % U. 34-35	TO 78
80	95	

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: OF ▨

SCHOOL STAMP U. S. 2-3

STUDENT NAME ▨

STUDENT NUMBER U. S. 4 5 6 7

GRADE U. S. 9

ROOM ▨

UNIT U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		▨

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2		SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE PRES. → S. 13-16	PRES. INIT. → S. 17-19	SKILL NO. → S. 20-21	↓ PAGE NO. S. 22-57	↓ INST. TECH CODES S. 58-71	SCORE ▨	MAX. POINTS ▨	SCORE	% S. 72-73	SCORE	% S. 74-75	▨	S. 76-77	
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW

UNCH SAMPLE

PRE %	POST. %	
U. 32-33	U. 34-35	TO 78
80	95	

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER ↓	ENTER POINTS PER SKILL	PRE	% ↓	POST	% ↓	POST	% ↓	POST	% ↓
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

Assign D-Mult. Pretest by writing D-Mult. in unit space at the top of the first Prescription Sheet and by writing Pretest on line 1.

Student completes D-Mult. Pretest and gives it to Aide for scoring.

This is a copy of Susan's Pretest that has been scored by the Aide. Turn to pages 189 and 190 for directions to the Aide. Page 189 will tell you (in Aide's role) where to record information on the first page of the Prescription Sheets; page 190 will tell you where to record information on the Unit Test Record.

SCHOOL CODE

NAME Susan Markham

NUMBER 1234 CLASS 4

ipi

individually prescribed instruction

MATHEMATICS

Pre-Test

LEVEL D

MULTIPLICATION (05)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

Appleton-Century-Crofts ACC Division of Meredith Publishing Company

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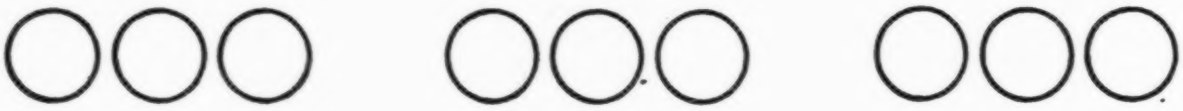
DEVELOPMENTAL EDITION

D MULTIPLICATION (05) PRE-TEST SKILL 1

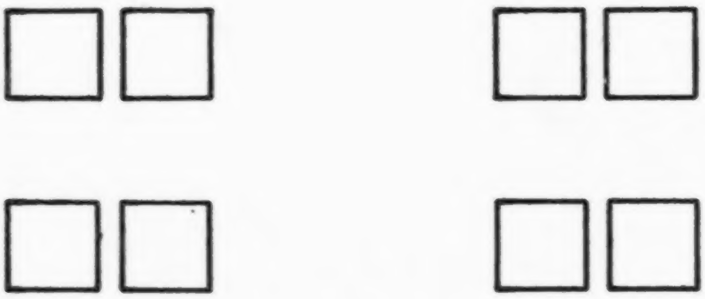
CIRCLE CORRECT BOX

TL. PTS.	
5	100%
NO. OF PTS.	%
4	80
[✓ 3]	[✓ 60]
2	40
1	20

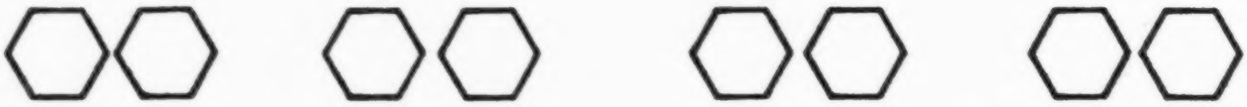
Directions: Complete each equation.



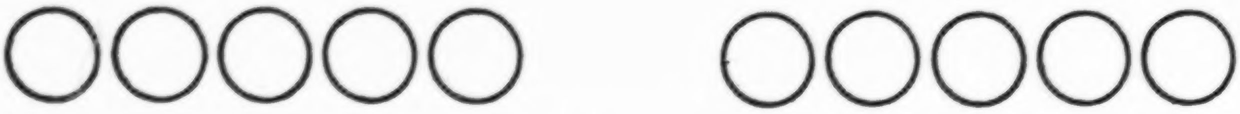
3 × 3 = 9



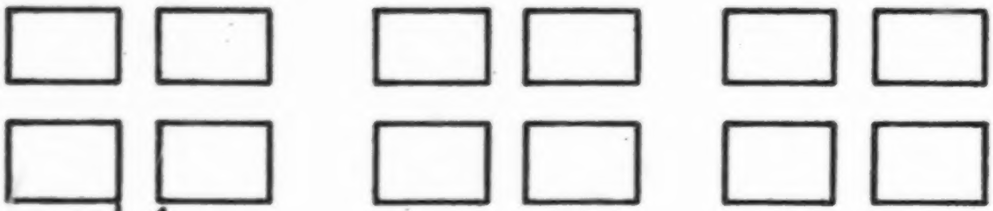
2 × 4 = 4



4 × 2 = 8



2 × 5 = 10

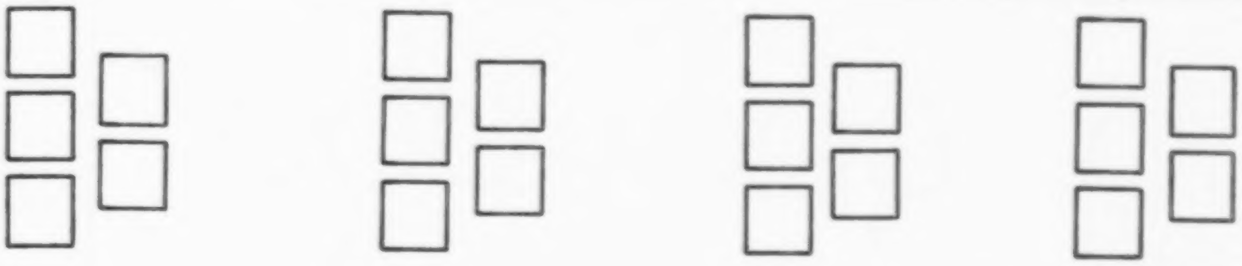


3 × 4 = 6

CIRCLE CORRECT BOX

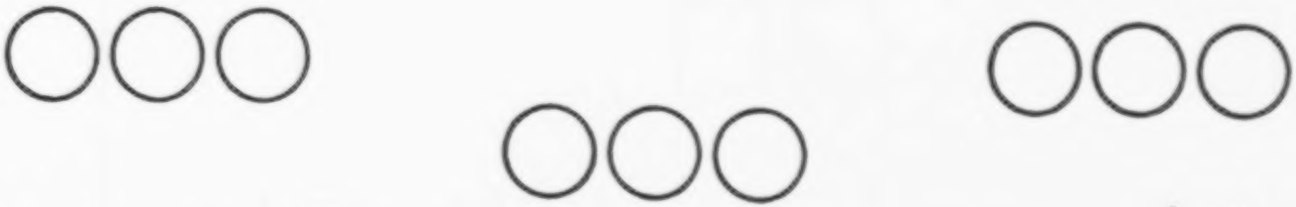
TL. PTS.	
5	100%
NO. OF PTS.	%
4	80
3	60
2	40
1	20
[✓ 0]	[✓ 0]

Directions: Complete each equation.



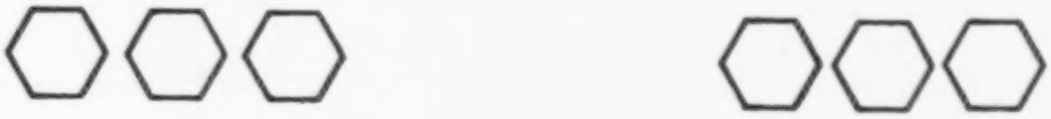
5 + 5 + 5 + 5 = 20

4 × 5 = X



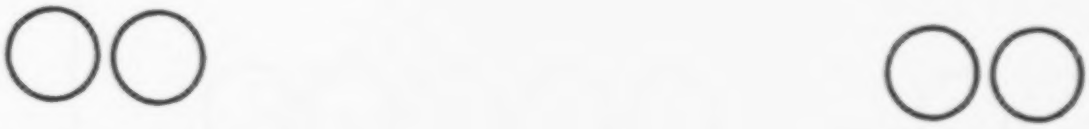
3 + 3 + 3 = 9

3 × 3 = X



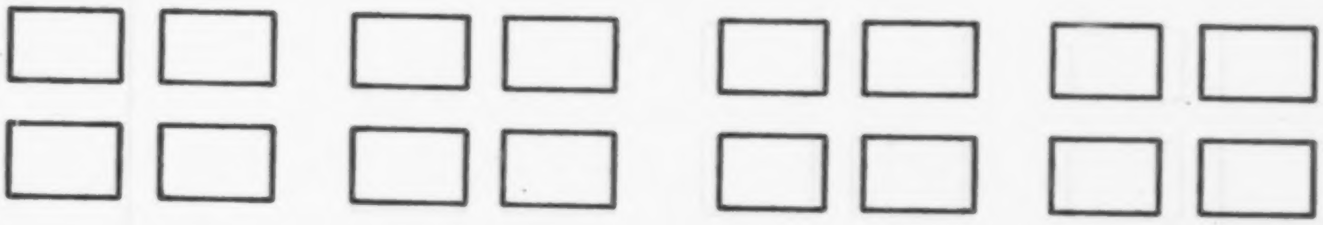
3 + 3 = 6

2 × 3 = X



2 + 2 = 4

2 × 2 = X



4 + 4 + 4 + 4 = 16

4 × 4 = X

CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 8]	[✓ 100%]
	NO. OF PTS.	%
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13

Directions: Multiply.

$\begin{array}{r} 9 \\ \times 1 \\ \hline 9 \end{array}$ $\begin{array}{r} 0 \\ \times 6 \\ \hline 0 \end{array}$ $\begin{array}{r} 1 \\ \times 3 \\ \hline 3 \end{array}$ $\begin{array}{r} 7 \\ \times 0 \\ \hline 0 \end{array}$

6 × 1 = 6

0 × 8 = 0

0 × 0 = 0

5 × 0 = 0

D MULTIPLICATION (05) PRE-TEST

SKILL 4

CIRCLE CORRECT BOX

TL. PTS.	
20	100%
NO. OF PTS.	%
19	95
18	90
17	85
16	80
15	75
14	70
13	65
12	60
11	55
10	50
9	45
8	40
7	35
6	30
5	25
4	20
[✓ 3]	[✓ 15]
2	10
1	5

Directions: Multiply.

8 × 2 X	4 × 3 X	9 × 5 X	6 × 3 X	5 × 5 X
7 × 4 X	10 × 2 X	5 × 4 X	8 × 5 X	4 × 2 X
6 × 5 X	1 × 4 4	7 × 2 X	2 × 3 X	8 × 4 X

3 × 9 = ___ X

5 × 1 = 5

3 × 0 = 0

4 × 10 = ___ X

2 × 9 = ___ X

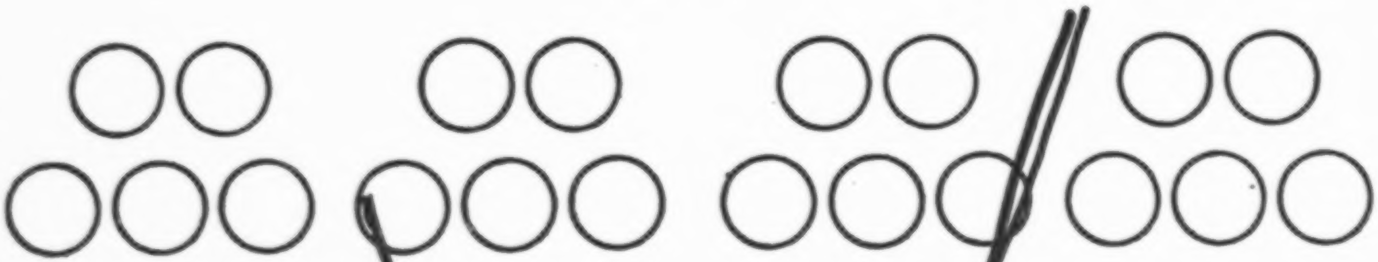
D MULTIPLICATION (05) PRE-TEST

SKILL 5

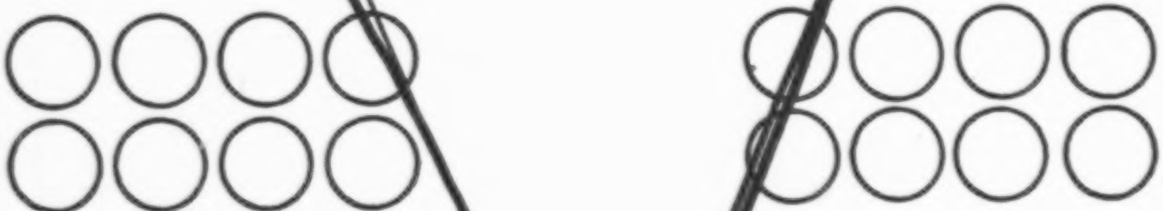
CIRCLE CORRECT BOX

TL. PTS.	
5	100%
NO. OF PTS.	%
4	80
3	60
2	40
1	20
0	0

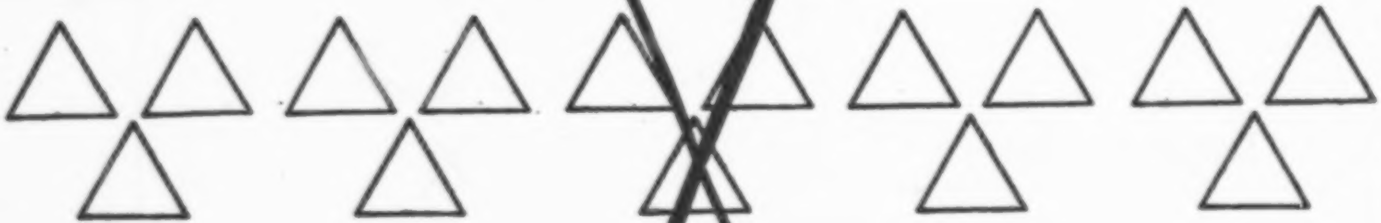
Directions: Fill in the blank to complete each equation.



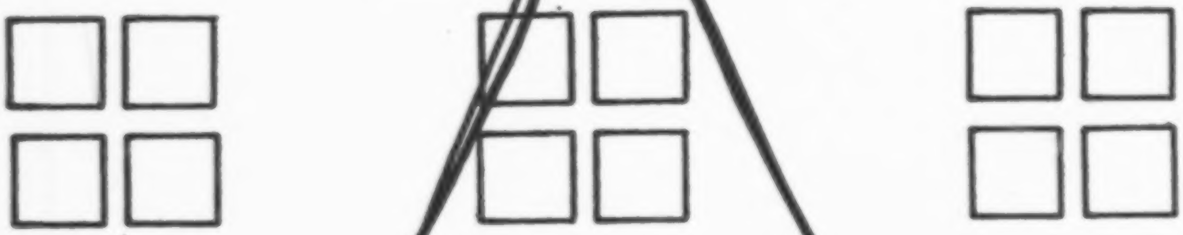
_____ × 5 = 20



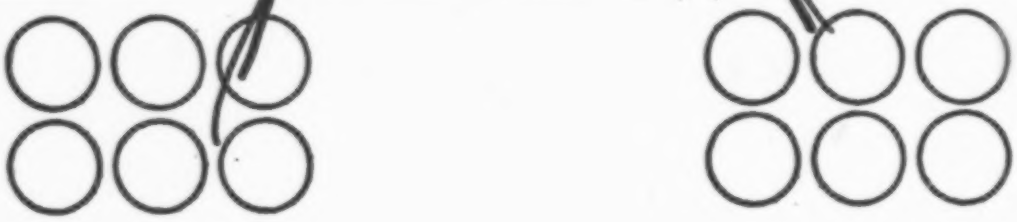
2 × 8 = _____



5 × _____ = 15



_____ × 4 = 12



2 × _____ = 12

D MULTIPLICATION (05) PRE-TEST

SKILL 6

CIRCLE CORRECT BOX

TL. PTS.	
5	100%
NO. OF PTS.	%
4	80
3	60
[✓ 2]	[✓ 40]
1	20

Directions: Multiply.

4 × 2 = ____ X

2 × 4 = ____ X

3 × 7 = ____ X

7 × 3 = ____ X

1 × 6 = 6

6 × 1 = 6

2 × 5 = ____ X

5 × 2 = ____ X

9 × 3 = ____ X

3 × 9 = ____ X

D MULTIPLICATION (05) PRE-TEST

SKILL 7

CIRCLE CORRECT BOX

TL. PTS.	
5	100%
NO. OF PTS.	%
4	80
3	60
2	40
1	20
0	0

Directions: Circle the answer.

In the problem 3 × 2 = 6, what is the 6 called?

factor sum quotient product

In the problem 7 × 4 = 28, what is the 7 called?

factor sum quotient product

How many factors are there in the problem 2 × 1 = 2?

one two three four

In the problem 5 × 6 = 30, which number or numbers are factors?

only 5 both 5 and 6 5, 6, and 30 only 30

In the problem 5 × 6 = 30, which number or numbers are products?

only 5 both 5 and 6 5, 6, and 30 only 30

D MULTIPLICATION (05) PRE-TEST

SKILL 8

CIRCLE CORRECT BOX

TL. PTS.	
[✓ 5]	[✓ 100%]
NO. OF PTS.	%
4	80
3	60
2	40
1	20

Directions: Solve each problem. Write your answer on the line and label it.

Tom had 3 piles of cards. There were 4 cards in each pile. How many cards were there in all?

12

Bob went bowling. In each of 3 tries he knocked down 6 pins. How many pins did he knock down altogether?

18

Three boys went fishing. Each boy caught 5 fish. How many fish did they catch altogether?

15

How many marbles would five boys have altogether if each boy had 4 marbles?

20

Mr. Gibbons had 3 bunches of bananas. There were 7 bananas in each bunch. How many bananas were there altogether?

21

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF ▨

SCHOOL STAMP U. S. 2-3

STUDENT NAME Susan Markham

STUDENT NUMBER	1	2	3	4
U. S.	4	5	6	7

GRADE	4	ROOM 102
U. S.	9	▨

UNIT D-Mult. U. S. 10 11 12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		▨

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2		SC'S INIT.	DAYS* WORKED IN SKILL	NOTES
	DATE PRES.	PRES. INIT.	SKILL NO.	PAGE NO.	INST. TECH CODES	SCORE	MAX. POINTS	SCORE	%	SCORE	%			
	S. 13-16	S. 17-19	S. 20-21	S. 22-57	S. 58-71	▨	▨		S. 72-73		S. 74-75	▨	S. 76-77	
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														

AIDE

Fill in the required data information on the first Prescription Sheet in your packet:

a. Student's name
b. Number
c. Grade
d. Room
e. Unit
f. Page number (entered for you)
g. Unit began (Pretest corrected 3/3)

Score and record Pretest information on the Prescription Sheet in your packet:

a. Skill numbers
b. Maximum points per skill
c. Student's points per skill
d. Percentages per skill
e. Average score and percentage
f. Date corrected (3/3)

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

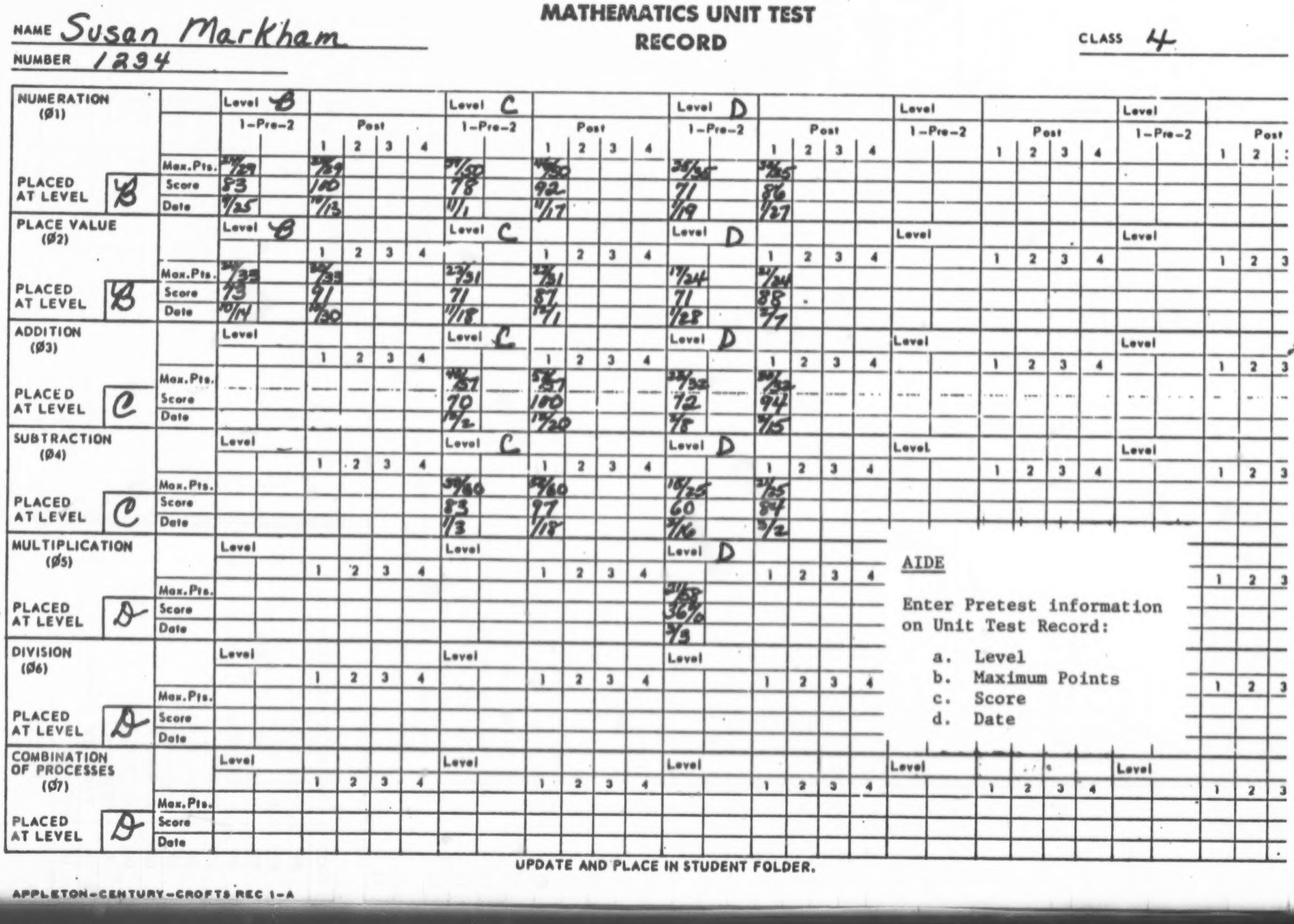
OVERFLOW

JNCH SAMPLE

PRE %	POST. %
U. 32-33	U. 34-35
80	95

TO 78

PRE AND POST TEST SCORES								
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									



NAME Susan Markham

NUMBER 1234

MATHEMATICS UNIT TEST RECORD

CLASS 4

		1-Pre-2		Post 1	2	3	4	1-Pre-2		Post 1	2	3	4	1-Pre-2		Post 1	2	3	4	1-Pre-2		Post 1	2	3	4	1-Pre-2		Post 1	2	3
NUMERATION (01)		Level B						Level C						Level D						Level						Level				
PLACED AT LEVEL B	Max.Pts.	24/29		29/29				39/50		46/50				25/35		30/35														
	Score	83		100				78		92				71		86														
	Date	9/25		10/13				11/1		11/17				1/19		1/27														
PLACE VALUE (02)		Level B						Level C						Level D						Level						Level				
PLACED AT LEVEL B	Max.Pts.	26/35		32/35				22/31		27/31				17/24		21/24														
	Score	73		91				71		87				71		88														
	Date	10/14		10/30				11/18		12/1				1/28		2/7														
ADDITION (03)		Level						Level C						Level D						Level						Level				
PLACED AT LEVEL C	Max.Pts.							40/57		57/57				23/32		30/32														
	Score							70		100				72		94														
	Date							12/2		12/20				3/8		4/15														
SUBTRACTION (04)		Level						Level C						Level D						Level						Level				
PLACED AT LEVEL C	Max.Pts.							50/60		58/60				15/25		21/25														
	Score							83		97				60		84														
	Date							1/3		1/18				3/16		5/2														
MULTIPLICATION (05)		Level						Level						Level D																
PLACED AT LEVEL D	Max.Pts.													21/58																
	Score													36%																
	Date													3/9																
DIVISION (06)		Level						Level						Level																
PLACED AT LEVEL D	Max.Pts.																													
	Score																													
	Date																													
COMBINATION OF PROCESSES (07)		Level						Level						Level						Level						Level				
PLACED AT LEVEL D	Max.Pts.																													
	Score																													
	Date																													

AIDE

Enter Pretest information on Unit Test Record:

a. Level
b. Maximum Points
c. Score
d. Date

UPDATE AND PLACE IN STUDENT FOLDER.

APPLETON-CENTURY-CROFTS REC 1-A

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'As field tested by Research for Better Schools, Inc.

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MATHEMATICS

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MATHEMATICS UNIT TEST RECORD

NAME Susan Markham

NUMBER 1234

CLASS 4

FRACTIONS (08)		Level						Level						Level						Level						Level					
		1–Pre–2		Post 1	2	3	4	1–Pre–2		Post 1	2	3	4	1–Pre–2		Post 1	2	3	4	1–Pre–2		Post 1	2	3	4	1–Pre–2		Post 1	2	3	
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														
MONEY (09)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														
TIME (10)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														
SYSTEMS OF MEASUREMENT (11)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														
GEOMETRY (12)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	
	Max.Pts.																														
PLACED AT LEVEL D	Score																														
	Date																														
SPECIAL TOPICS (13)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	
	Max.Pts.																														
PLACED AT LEVEL	Score																														
	Date																														
ADDITION AND SUBTRACTION (34)		Level						Level						Level						Level						Level					
				1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	
	Max.Pts.																														
PLACED AT LEVEL C	Score																														
	Date																														

TEACHER

Examine Pretest starting on page 180. On your Prescription Sheet, circle the skill(s) in unit that require a prescription (under 85%). Record these skill numbers next to D-Mult. in unit space at top of sheet.

Examine the entire Pretest. Make a general statement about Susan's performance on the entire test:

Susan can: Use repeated addition; solve one-step multiplication problems using repeated addition.

Susan cannot: Multiply using factors 2-5; use multiplication terms.

Analyze Susan's behavior:

a. Describe behaviors which will facilitate learning: Susan uses manipulative aids well and works well with peer-tutor and small groups.

State how prescription will take these behaviors into account:

Manipulative aids, peer-tutor and small groups will be prescribed.

b. Describe behaviors which will hamper learning: Susan requests help often and views tests in a personal way.

State how prescription will take these behaviors into account:

Short assignments will be used to allow frequent evaluation and discussion of her work with teacher.

Select the first skill requiring a prescription (Skill #1).

Record the date, your initials, Skill # 1 and Read Student Page on line 1 of your Prescription Sheet. This starts your prescription.

Write what Susan must learn (page 26 of STS booklet): Group sets in order to complete statements with factors no larger than 5.

Analyze Susan's work on Pretest Skill 1.

Susan can: Group sets arranged in a single line.

Susan cannot: Group all sets (double line arrangement of sets).

Describe what Susan must learn for Skill 1.

Susan must learn: To group sets arranged in different patterns using factors 2-5.

This is a copy of the STS booklet for Skill 1 that Susan will work in.

Examine all the skill sheets and STS sheets (pp. 26 & 27) in the booklet to become familiar with materials for this skill.

Based on the previous diagnosis of Susan's behavior, her performance on the unit Pretest and, in particular, in the Skill 1 section, Susan was assigned the following on 3/3:

Page	Reason
Student Page	Introduces skills; previews work
2	Introduction to different arrangements of sets using factors 2 & 3
3	Practice on different arrangements of sets using factors 2 & 3
4	Practice on different arrangements of sets using factors 2 & 3
5	Practice on different arrangements of sets using factors 2 & 3
8	Additional practice in writing equations

Estimate of time needed: 2 class periods

Recheck these five pages.

Record these pages on your Prescription Sheet.

SCHOOL CODE ☐

NAME ______________ ______________________________

NUMBER ______________________ CLASS ______________________

ipi

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION
LEVEL D
MULTIPLICATION (C5)
SKILL 1

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

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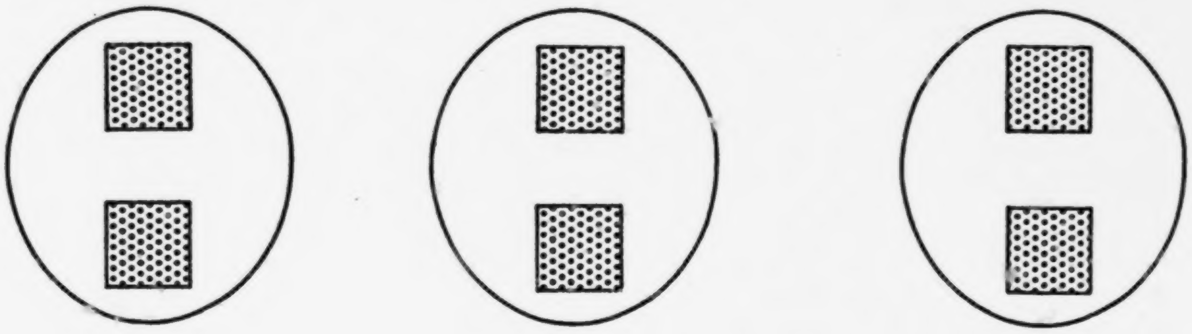
DEVELOPMENTAL EDITION

200

TO THE STUDENT

This picture shows ____ sets of ____ things.



How many things are there altogether?

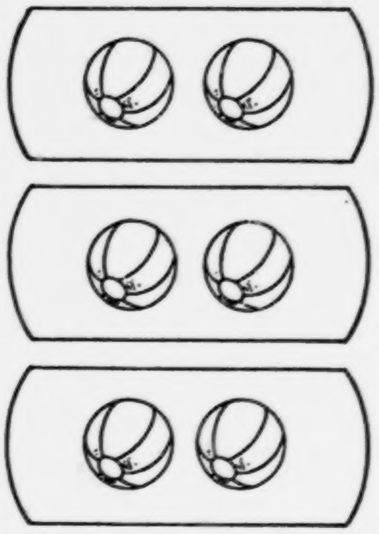
____ sets of ____ things = ____ things

In this booklet you will do multiplication problems with the aid of pictured sets.

Answers

3	2	3	2	6

Write the correct answers in the blanks.



How many sets are circled? 3

How many balls are in each set? 2

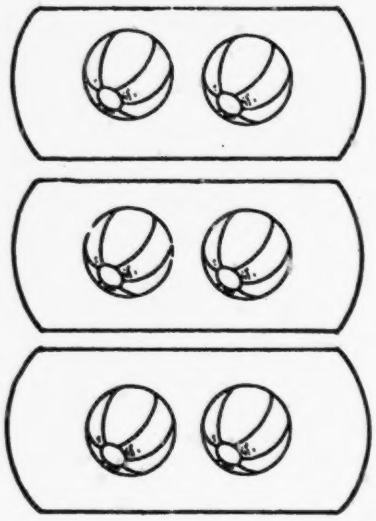
How many balls are there altogether? 6

When you have 3 sets of 2, write it 3 × 2.

3 × 2 is read 3 "times" 2.

For extra practice, do Page 17.

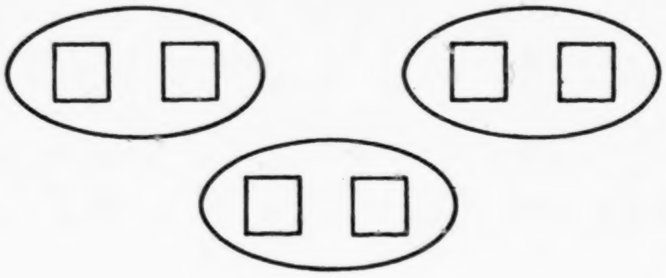
Write the correct answers in the blanks.



How many sets are circled? 3

How many balls in each set? 2

3 × 2 means 3 sets of 2

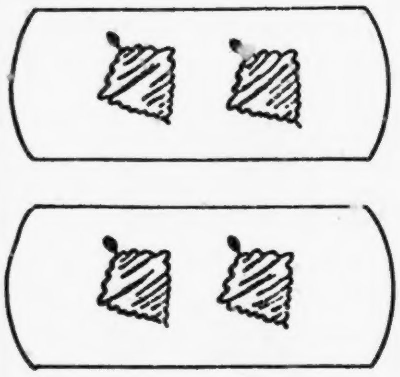


How many sets are circled? 3

How many squares in each set? 2

3 sets of 2 can be written as 3X2

Write the correct answers in the blanks.

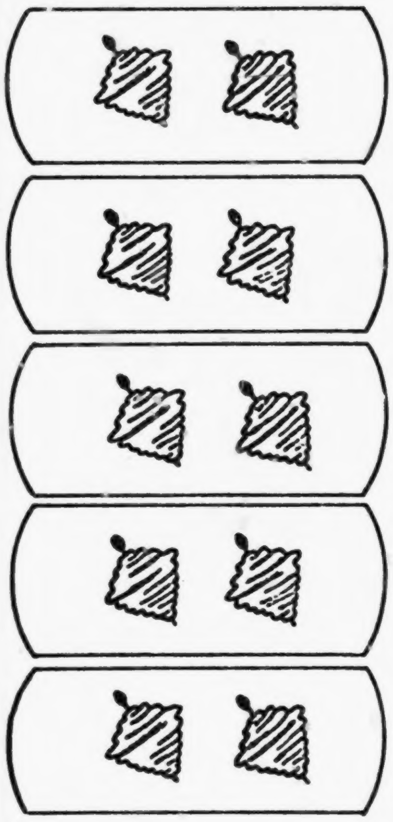


How many sets are circled? 2

How many tops are in each set? 2

How many tops altogether? 4

2 sets of 2 can be written as 2X2



How many sets are circled? 5

How many tops are in each set? 2

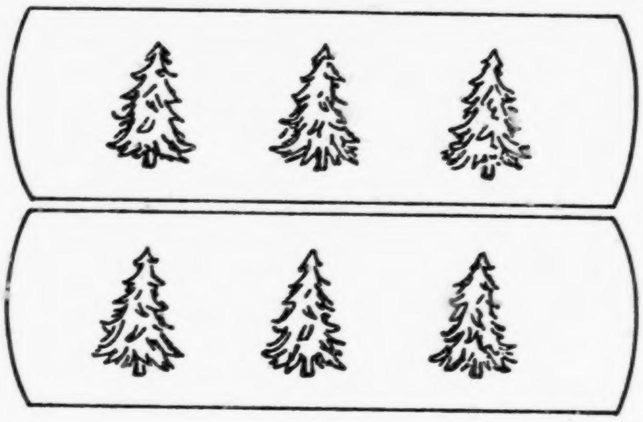
How many tops altogether? 10

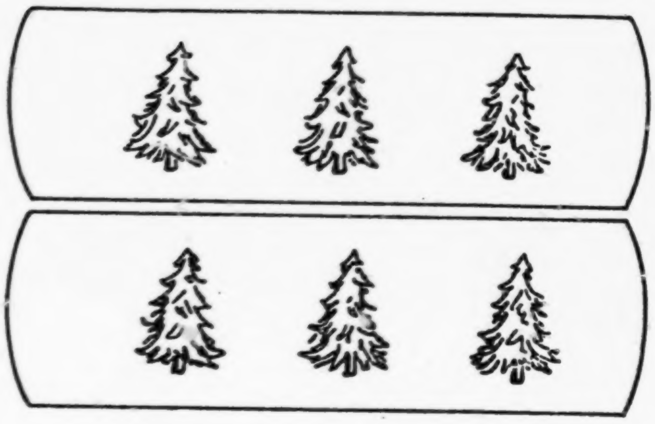
5 sets of 2 can be written as 5X2

For extra practice, do Page 18.

Look at the sets.

Write the correct answer in each blank.

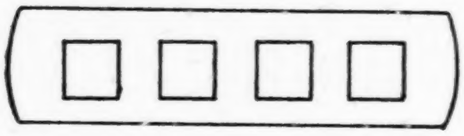


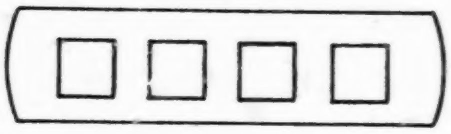


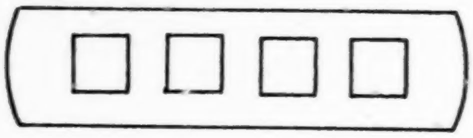
4 sets of 3

or

4 × 3 or 4 "times" 3







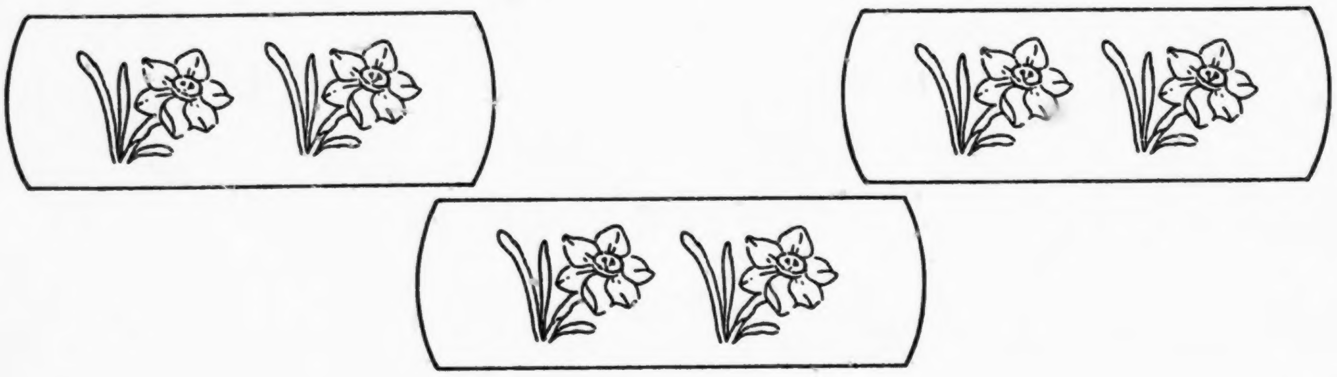
3 sets of 4

or

3× 4

For extra practice, do Page 19.

Write the correct answers in the blanks.



This picture shows 3 sets of 2.

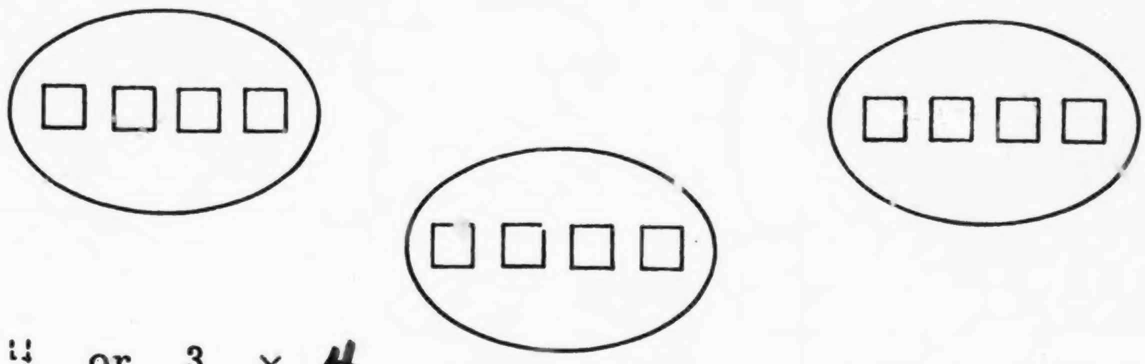
How many things altogether? 6

3 sets of 2 = 6. Write this as 3 × 2 = 6, and say 3 “times” 2 equals 6.

This is called multiplication.

3 × 2 = 6 is a multiplication equation.

Write the correct answers in the blanks.

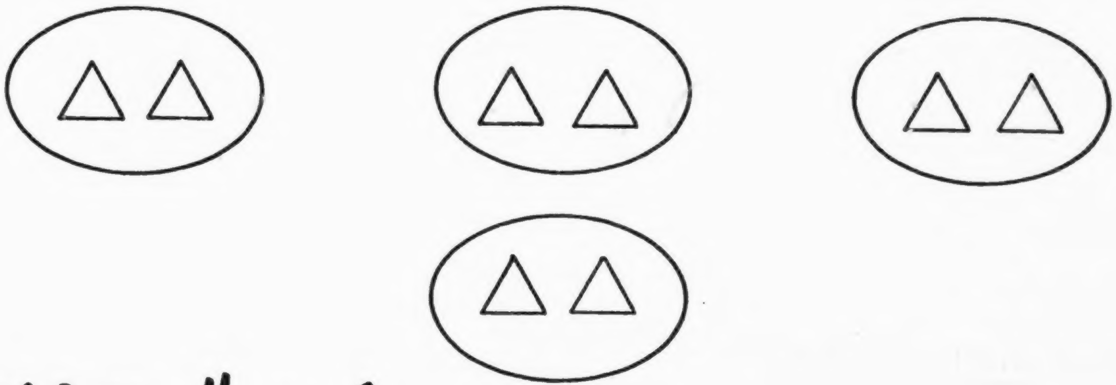


3 sets of 4 or 3 × 4

How many things altogether? 12

3 sets of 4 = 12

Write this as 3 × 4 = 12, and say 3 "times" 4 is "equal" to 12.



4 sets of 2, or 4 × 2

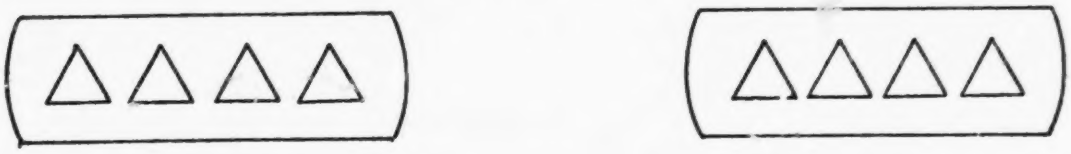
How many things altogether? 8

4 sets of 2 = 8

Write this as 4 × 2 = 8

For extra practice, do Page 20.

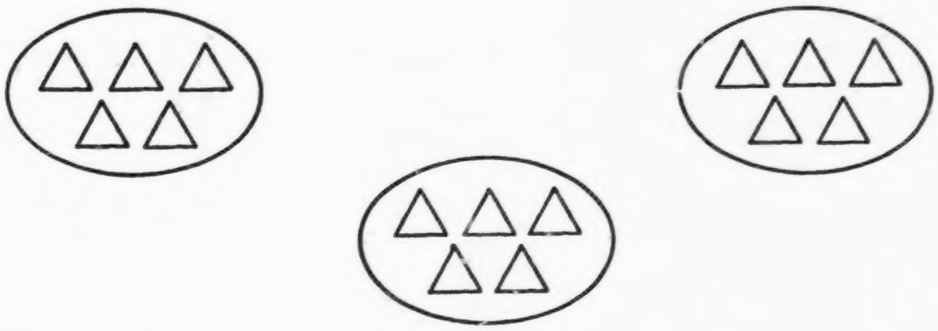
Write the multiplication equation for each picture. Fill in the blanks.



This picture shows 2 sets of 4.

How many triangles altogether? 8

2 × 4 = 8

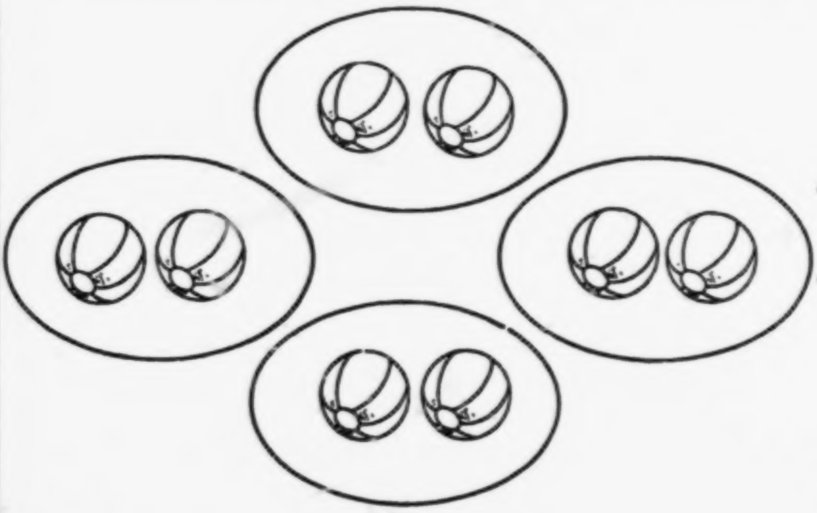


This picture shows 3 sets of 5.

How many triangles altogether? 15

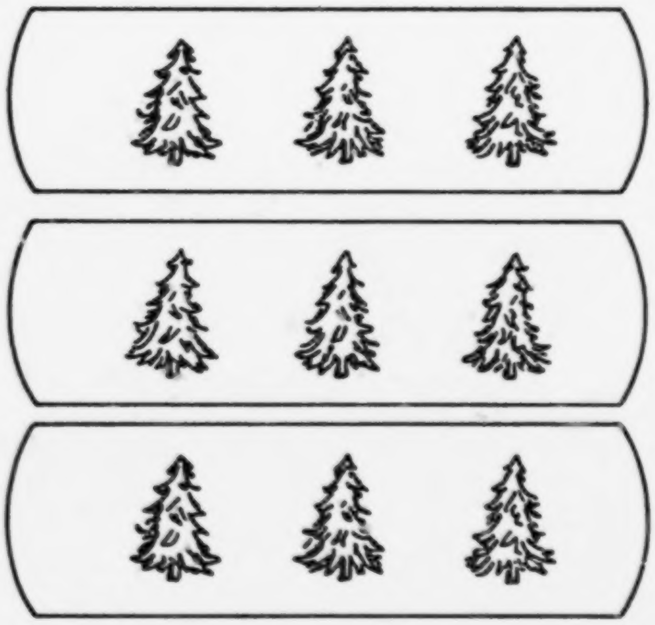
3 × 5 = 15

Write a multiplication equation for each picture.



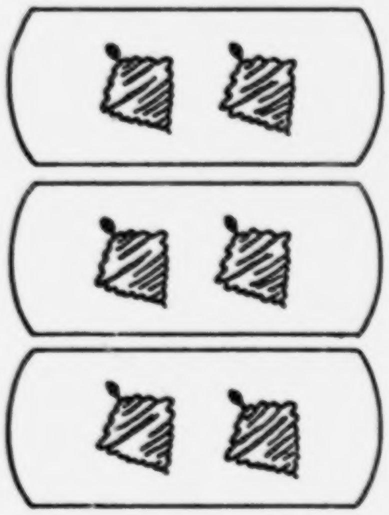
4 sets of 2 = 4 × 2

4 × 2 = 8



3 sets of 3 = 3 × 3

3 × 3 = 9

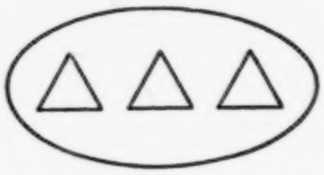


3 sets of 2 = 3 × 2

3 × 2 = 6

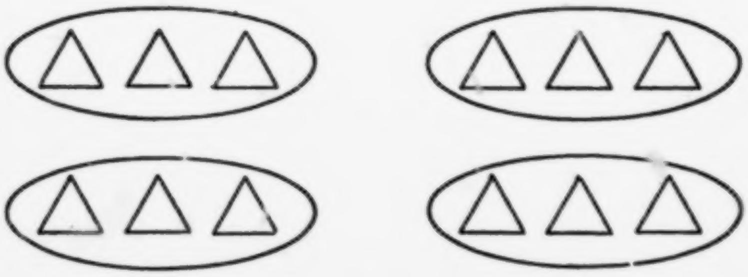
For extra practice, do Page 21.

Write a multiplication equation for each picture.



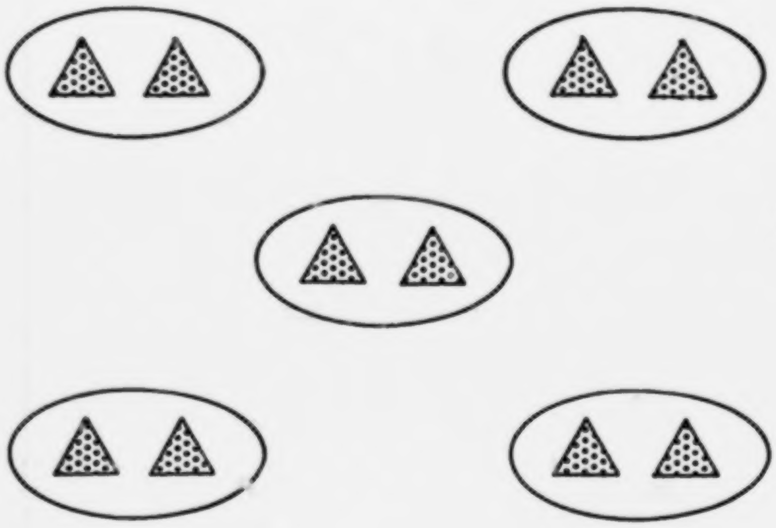
1 set of 3 = 1 × 3

1 × 3 = 3



4 sets of 3 = 4 × 3

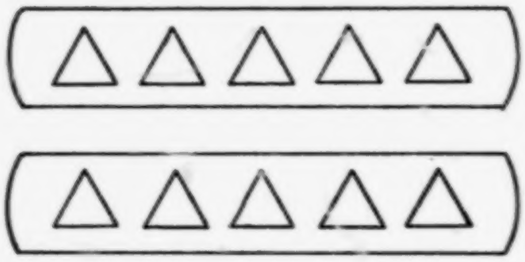
4 × 3 = 12



5 sets of 2 = 5 × 2

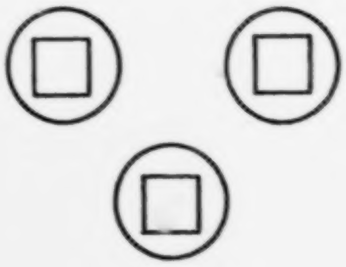
5 × 2 = 10

Write the multiplication equations for each picture.



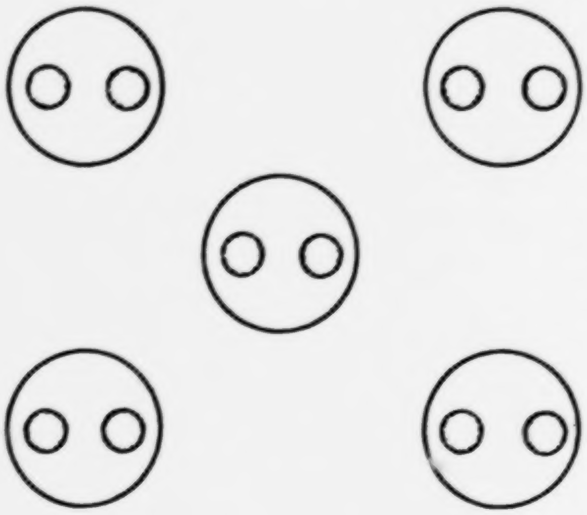
2 sets of 5 = 2 × 5

2 × 5 = 10



3 sets of 1 = 3 × 1

3 × 1 = 3

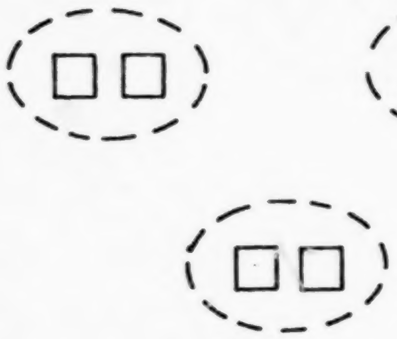


5 sets of 2 = 5 × 2

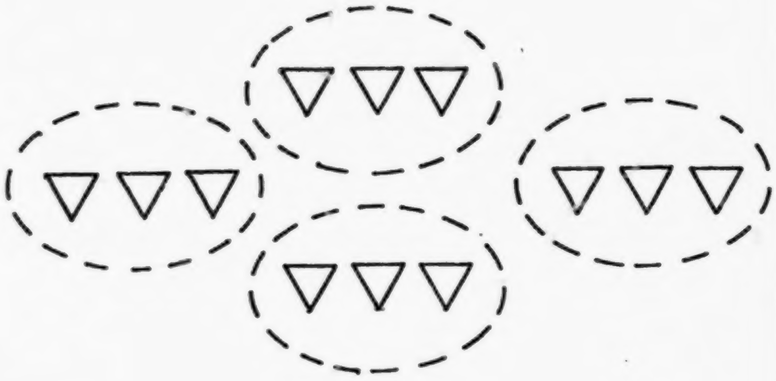
5 × 2 = 10

For extra practice, do Page 22.

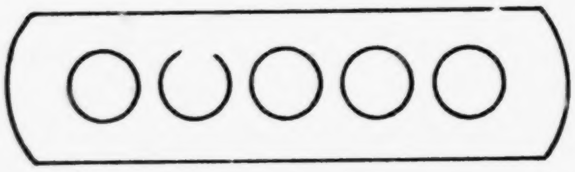
Count how many objects there are altogether and write the correct answers in the blanks.



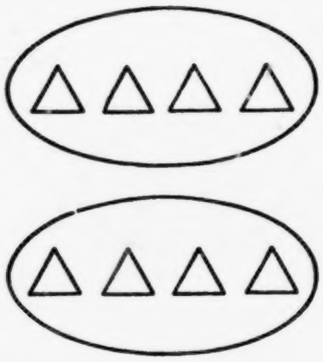
3 × 2 = 6



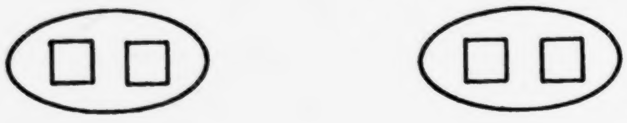
4 × 3 = 12



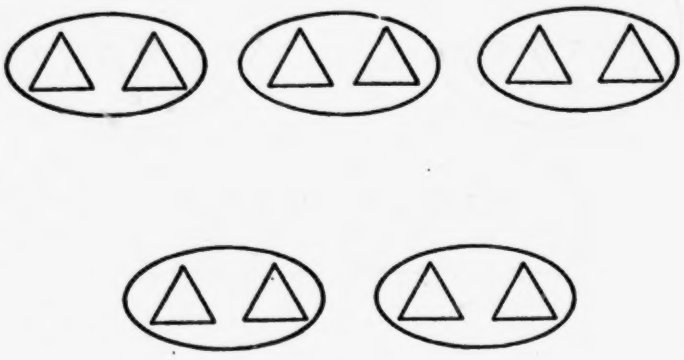
1 × 5 = 5



2 × 4 = 8

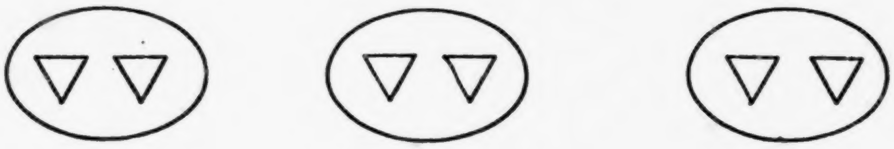


2 × 2 = 4



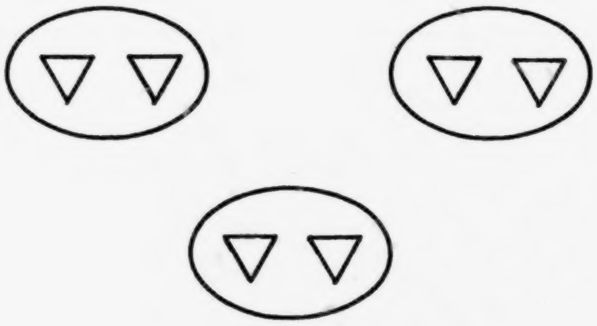
5 × 2 = 10

Write the multiplication equation for each picture.

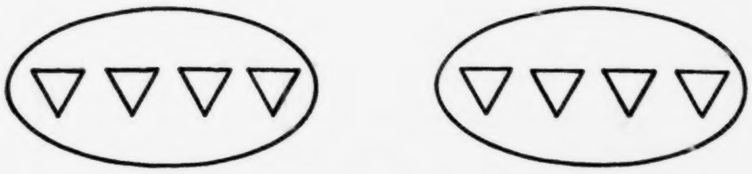


3 sets of 2 = 6

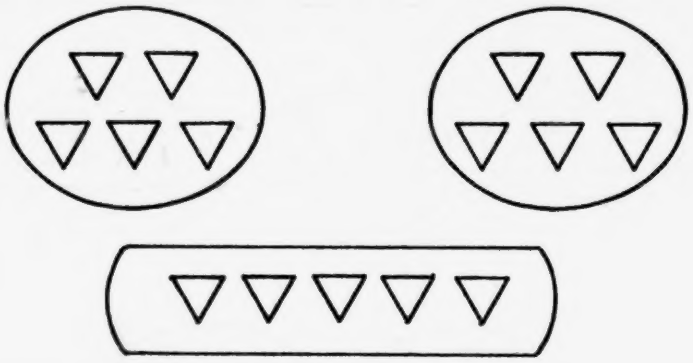
3 × 2 = 6



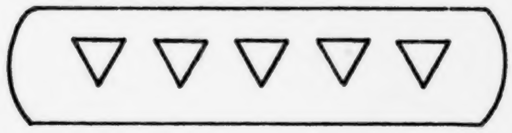
3 × 2 = 6



2 × 4 = 8



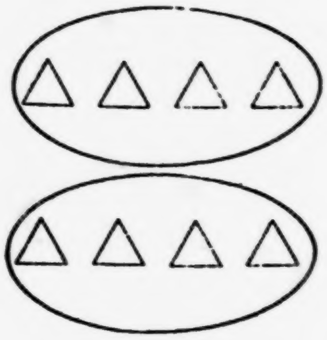
3 × 5 = 15



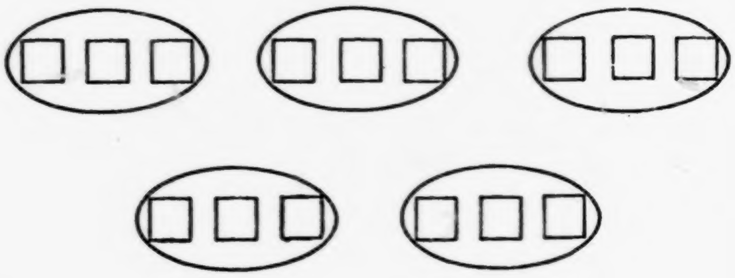
1 × 5 = 5

Page 13

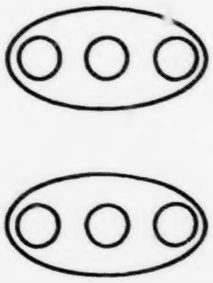
Write the multiplication equation for each picture.



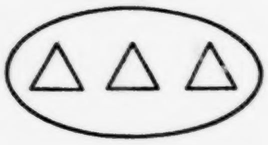
2 × 4 = 8



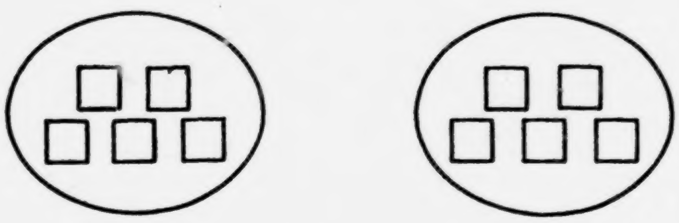
5 × 3 = 15



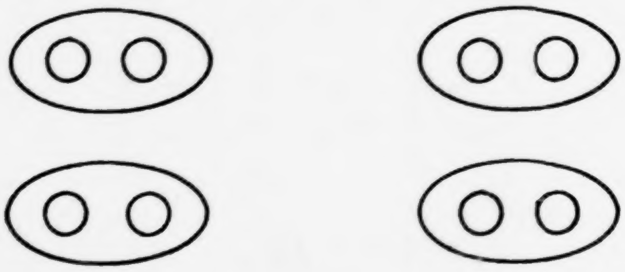
2 × 3 = 6



1 × 3 = 3



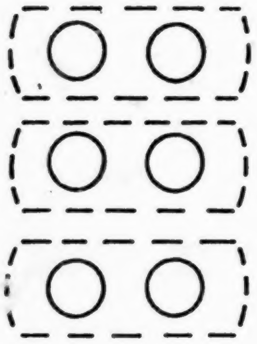
2 × 5 = 10



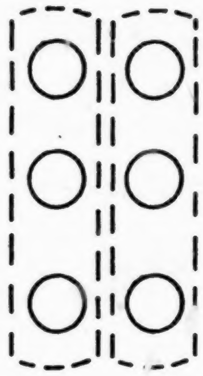
4 × 2 = 8

For extra practice, do Page 23.

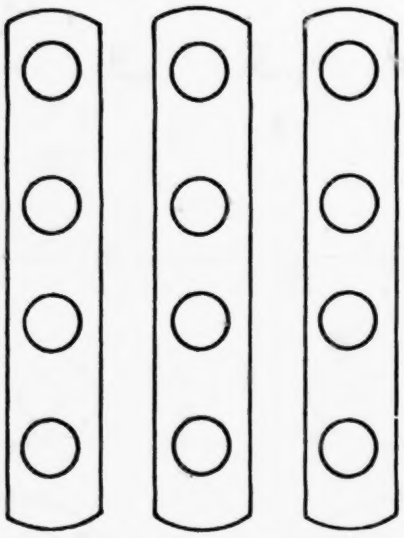
Circle the objects to make the pictures match the equations. Write the products in the blanks.



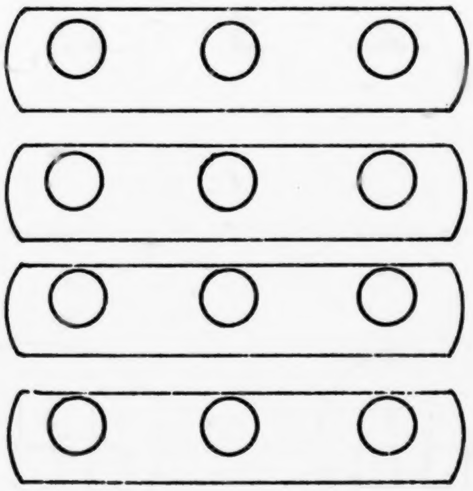
3 × 2 = 6



2 × 3 = 6



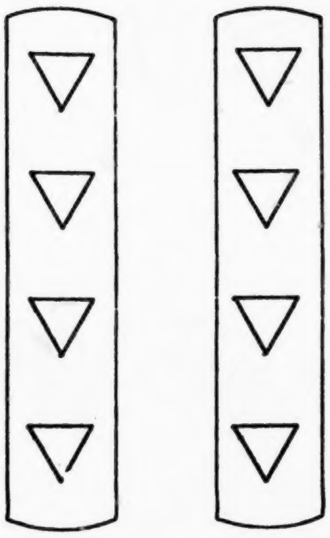
3 × 4 = 12



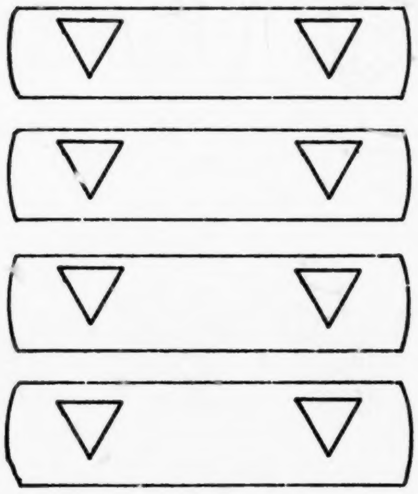
4 × 3 = 12

For extra practice, do Page 24.

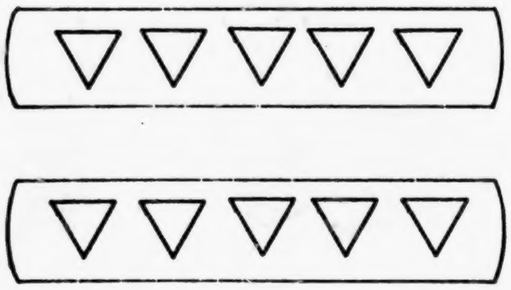
Circle the object to make the pictures match the equations. Write the products in the blanks.



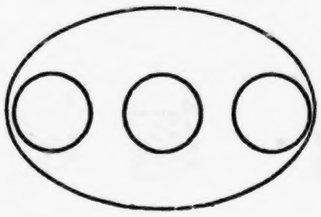
2 × 4 = 8



4 × 2 = 8



2 × 5 = 10

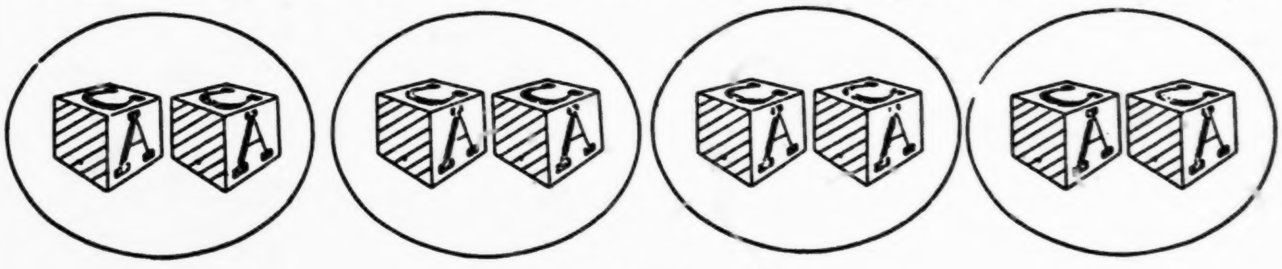


1 × 3 = 3

CET I

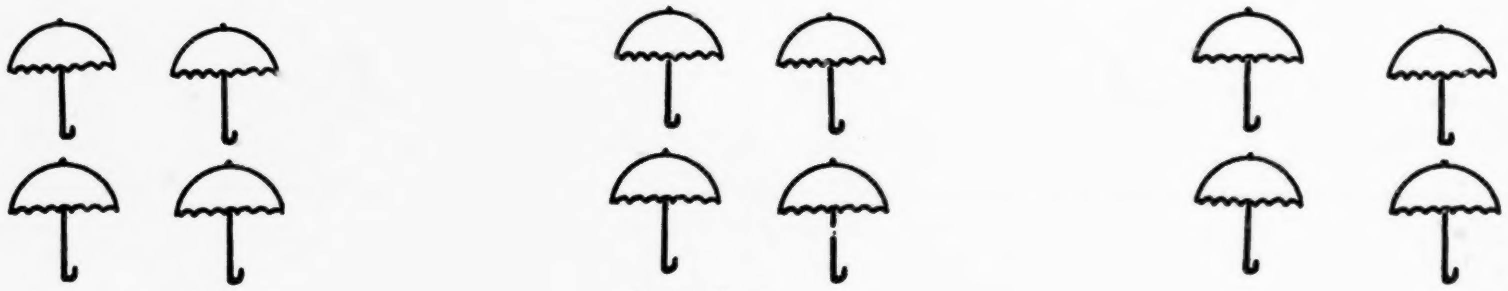
CIRCLE CORRECT BOX	TL. PTS.	
	4	100%
	NO. OF PTS.	
	3	75
	2	50
	1	25

Write the correct numeral in the blank to complete each equation.

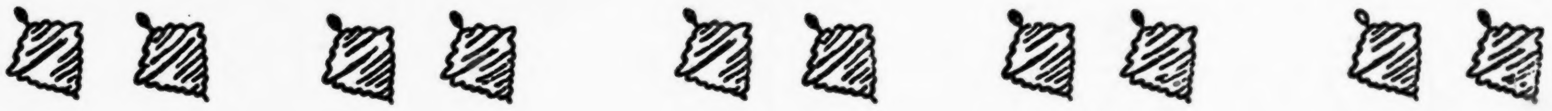


4 sets of 2 = ____

2 sets of 3 = ____



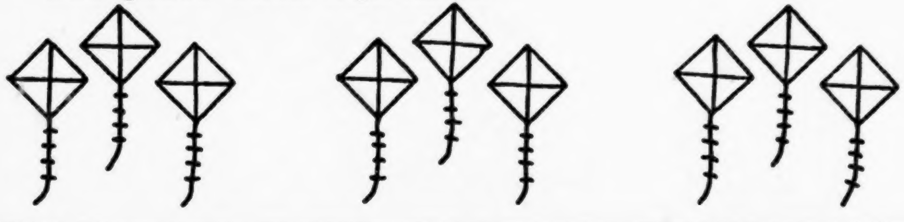
3 × 4 = ____



5 × 2 = ____

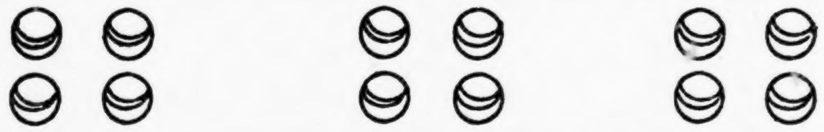
Complete each equation.

CIRCLE CORRECT BOX	TL. PTS.	
	4	100%
	NO. OF PTS.	
	3	75
	2	50
	1	25



3 + 3 + 3 = ____

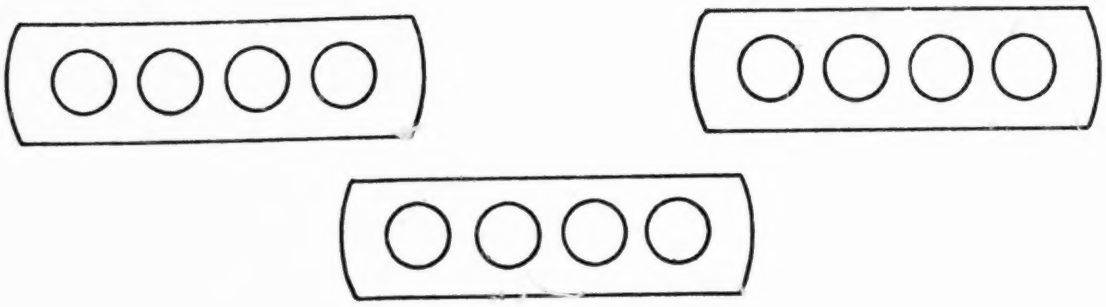
3 × 3 = ____



4 + 4 + 4 = ____

3 × 4 = ____

Write the correct answers in the blanks.



How many sets? 3

How many in each set? 4

There are 3 sets of 4 things.

Write this as 3 × 4.

× means "times."

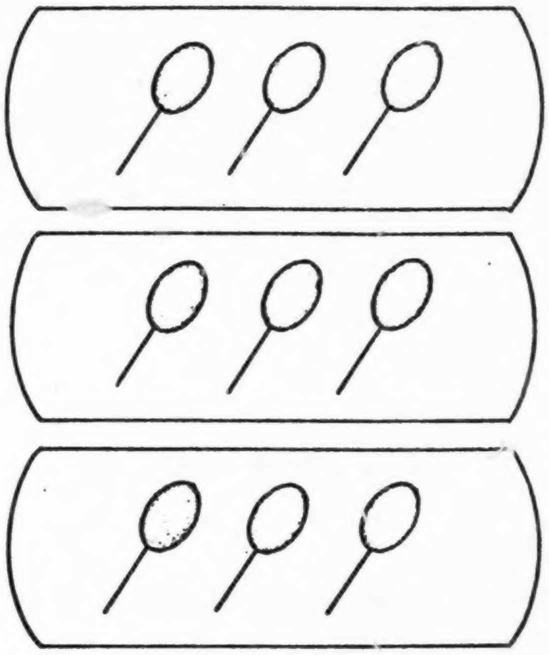
Look at the symbol 3 × 4.

3 is the "number of sets."

× means "times."

4 is the "number of things in each set."

Write the correct answers in the blanks.

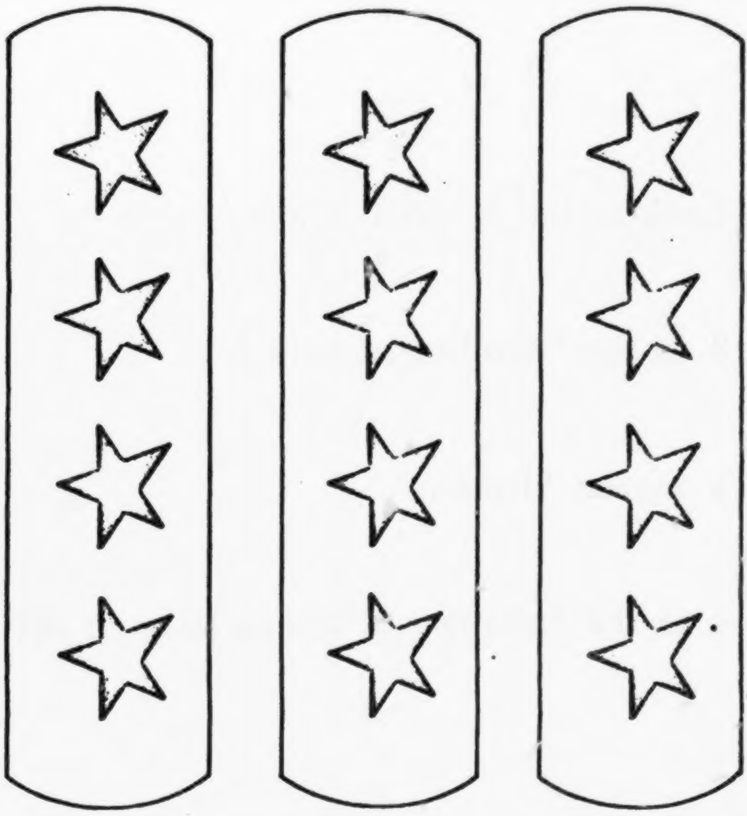


How many sets? 3

How many in each set? 3

3 sets of 3 can be written as

3 × 3.



How many sets? 3

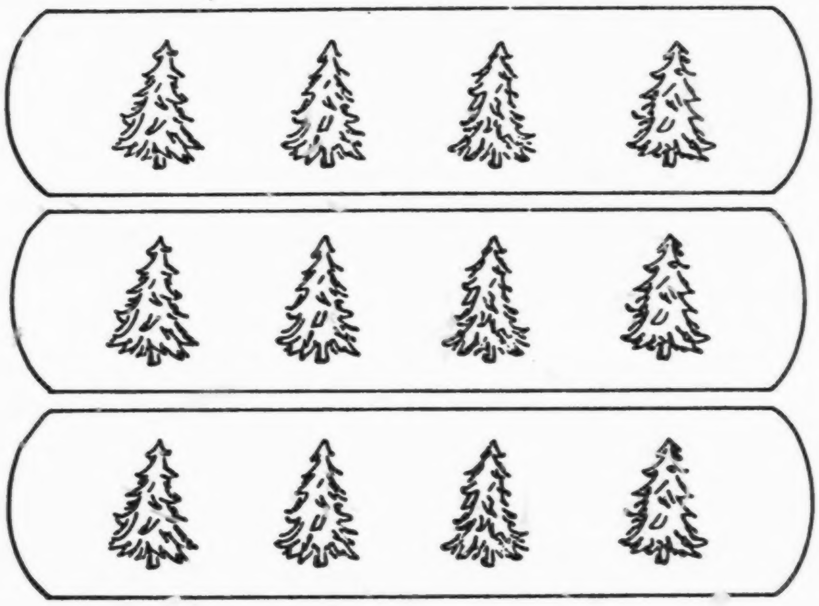
How many in each set? 4

3 sets of 4 can be written as

3 × 4.

Write 3 sets of 4 as 3 × 4.

3 sets of 4
↕ ↕
3 × 4



Pick out the expression from those in the box that matches each expression below. Write in the correct answers.

1 × 5

2 × 4

5 × 2

3 × 2

3 × 1

2 × 3

3 sets of 2 3 × 2

1 set of 5 1 × 5

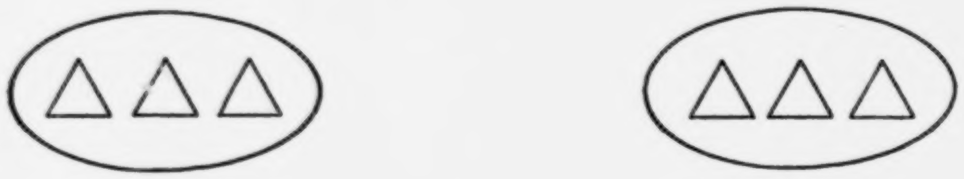
2 sets of 4 2 × 4

5 sets of 2 5 × 2

2 sets of 3 2 × 3

3 sets of 1 3 × 1

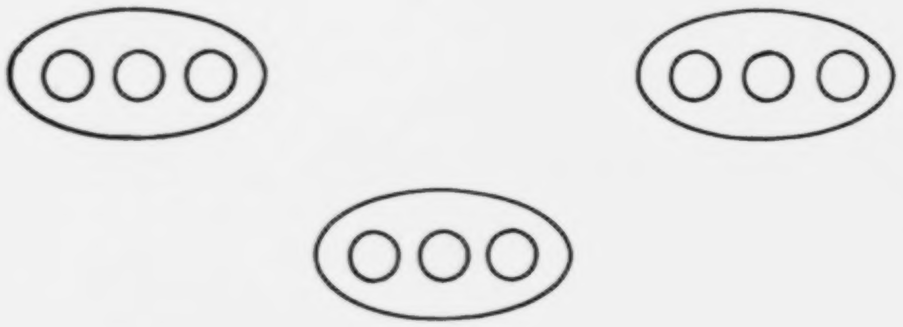
Look at the pictures. Answer the questions by filling in the blanks.



2 sets of 3

How many things altogether? 6

2 sets of 3 = 6



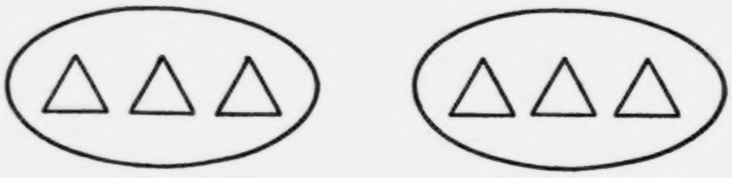
3 sets of 3

How many things altogether? 9

3 sets of 3 = 9

Write the correct answers in the blanks.

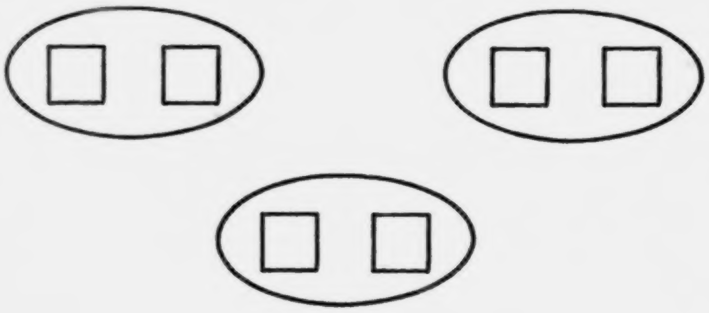
2 sets of 3



How many altogether? 6

2 sets of 3 = 6

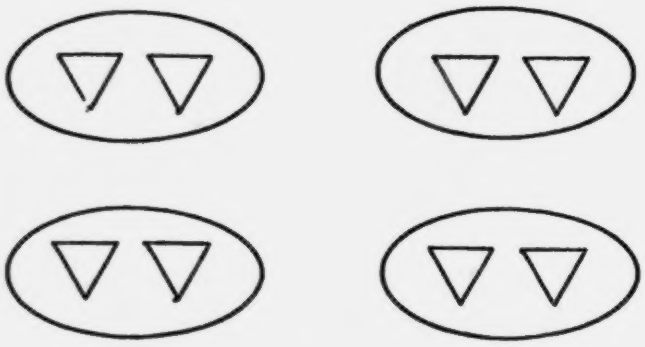
3 sets of 2



How many altogether? 6

3 sets of 2 = 6

4 sets of 2



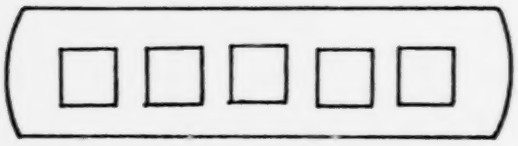
How many altogether? 8

4 sets of 2 = 8

or

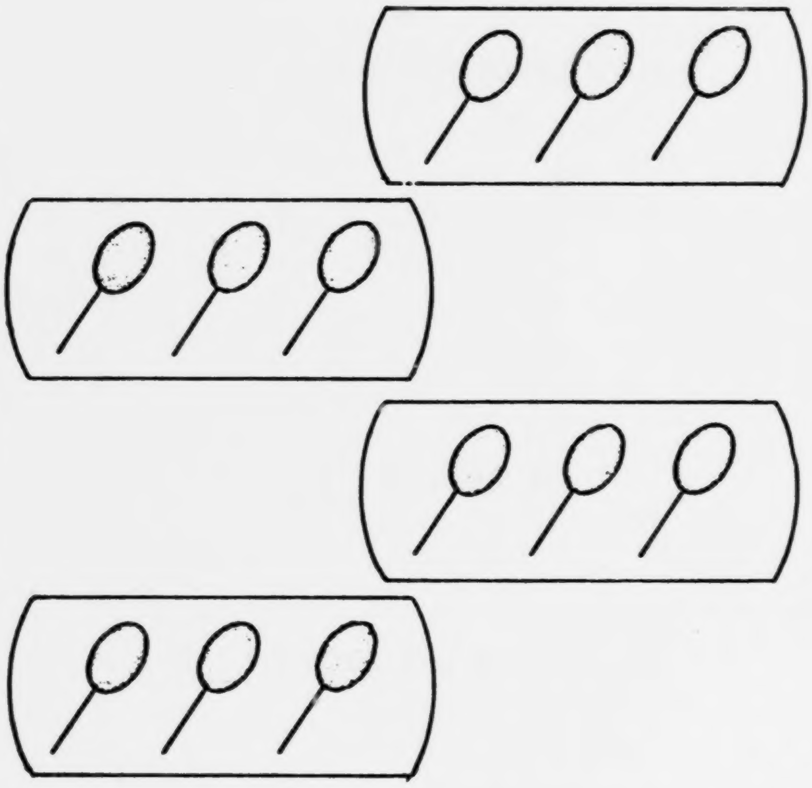
4 × 2 = 8

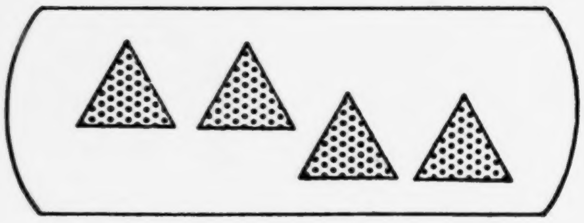
Write an equation for each problem and fill in the blanks.



1 set of 5 = 1 × 5

1 × 5 = 5





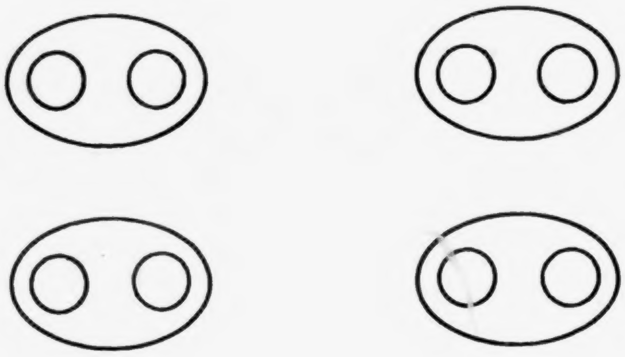
4 sets of 3 = 4 × 3

4 × 3 = 12

1 set of 4 = 1 × 4

1 × 4 = 4

Write the correct answers in the blanks.



How many sets? 4

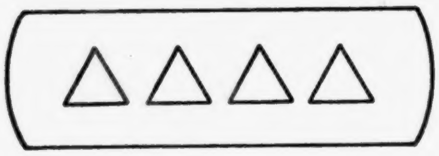
How many in each set? 2

How many altogether? 8

4 sets of 2 = 8

or

4 × 2 = 8

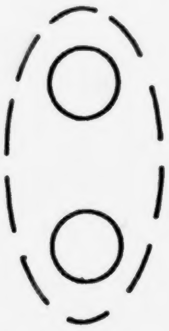


How many sets? 1

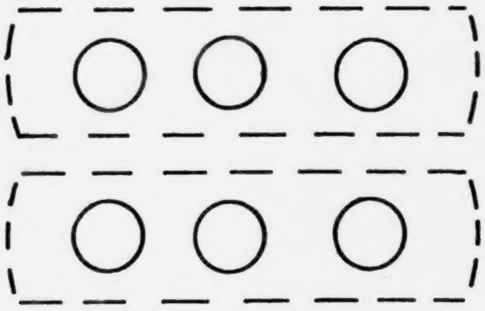
How many in each set? 4

1 × 4 = 4

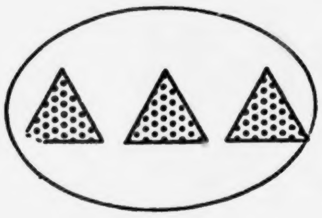
Circle the objects to make the pictures match the description.



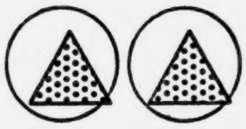
3 sets of 2



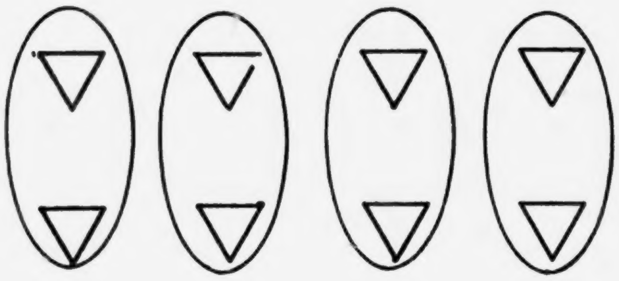
2 sets of 3



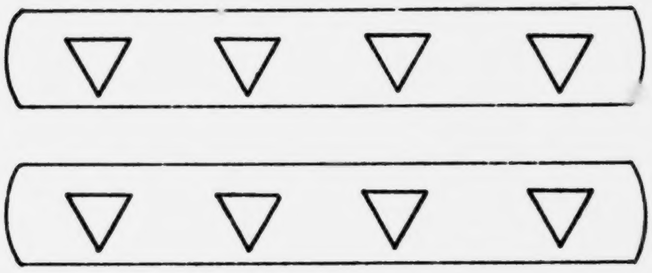
1 set of 3



2 sets of 1



4 sets of 2



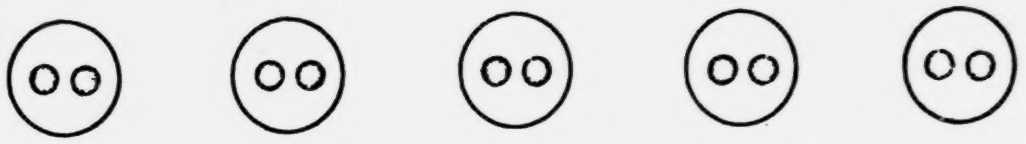
2 sets of 4

CET II

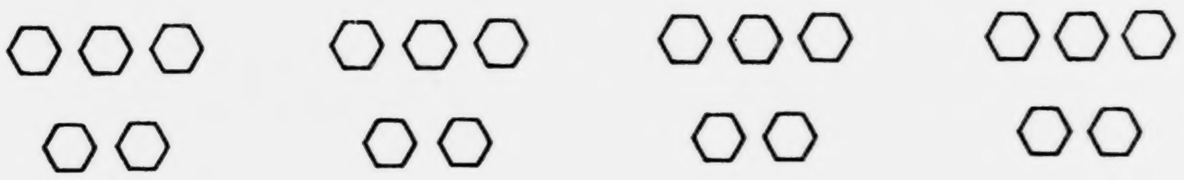
CIRCLE CORRECT BOX

TL. PTS.	
4	100%
NO. OF PTS.	%
3	75
2	50
1	25

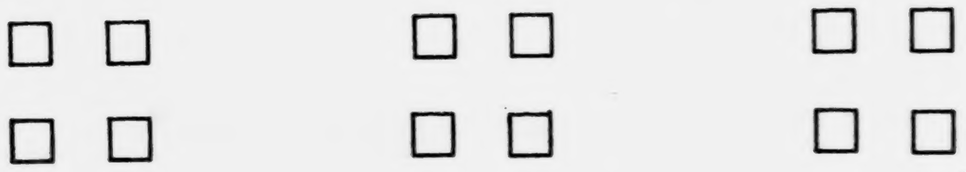
Write the correct numeral in each blank to complete each equation.



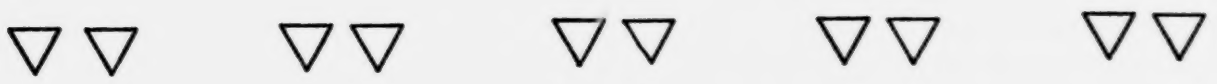
5 sets of 2 = ____



4 sets of 5 = ____



3 × 4 = ____

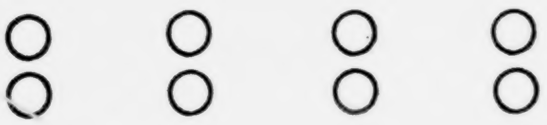


5 × 2 = ____

Complete each equation.

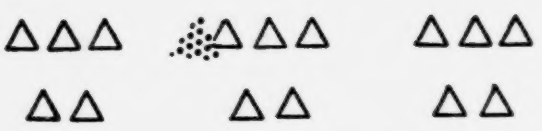
CIRCLE CORRECT BOX

TL. PTS.	
4	100%
NO. OF PTS.	%
3	75
2	50
1	25



2 + 2 + 2 + 2 = ____

4 × 2 = ____



5 + 5 + 5 = ____

3 × 5 = ____

Page 26

LEVEL D, MULTIPLICATION, SKILL 1

OBJECTIVE: Groups sets (or pictured sets) in order to complete statements. Given a picture of six objects grouped into sets of two, completes "3 sets of 2" = ____, and 3 × 2 = ____. Factors no larger than 5.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Is given picture of 6 objects grouped in sets of 2. Finds how many sets, how many objects in each set, how many altogether. Writes "3 sets of 2" as 3 × 2. Reads "×" as "times."	17
2.	Is given picture of 6 objects grouped in sets of 2. Finds how many sets, how many objects in each set, writes 3 × 2 as 3 sets of 2, and 3 sets of 2 as 3 × 2.	
3.	Is given pictured sets, answers questions, and writes multiplication signs. For example, 5 × 2 is "5 sets of 2."	18
4.	Is given pictured sets, fills in number of sets, how many objects in each set, using multiplication sign.	19
5.	Given picture of 6 objects grouped in sets of 2, finds how many altogether. Reads multiplication equation, 3 × 2 = 6, as "3 sets of 2" = 6, and 3 times 2 is equal to 6.	
6.	Answers questions about pictured sets and solves multiplication equations.	20
7.	Answers questions about pictured sets and solves multiplication equations.	
8.	Writes problems such as 4 sets of 2 = 4 × ____ and 4 × ____ = 8 (using pictured sets).	21
9.	Writes and solves problems such as 1 set of ____ = 1 × ____ = ____ (using pictured sets).	
10.	Writes and solves problems such as ____ sets of ____ = 5 × ____ = ____ (using pictured sets).	
11.	Uses pictured sets, solves multiplication equations. For example, 3 × 2 = ____.	22
12.	Uses pictured sets, writes what each picture shows, and solves equations.	
13.	Uses pictured sets, writes what each picture shows, and solves equations.	23
14.	Circles pictured objects to make picture match given multiplication equation. Solves equation.	24
15.	Circles pictured objects to make picture match given multiplication equation. Solves equation.	
16.	CET I.	
	CET II.	25

Circle pages that are to be done.

Page 27

Standard Teaching Sequence, Con't.

1967 - 68

Teaching Aids:

- Assorted flashcards
- Pupil's multiplication and division kit
- Multo Game
- Imma Whiz Game
- Dominoes
- Assorted counting aids - for regrouping - abacus - beads - sticks

These are the five skill sheets completed by Susan and corrected by the Aide.

Record (in role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets:

Susan can group different sets using factors 2 & 3.

Susan cannot use factors 4 & 5.

Describe how Susan worked with the prescription: Asked constantly for teacher approval as she worked through the materials.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Revise original prescription
_X_ Extend the prescription
_____ Assign a CET for Skill #_____

Why? Susan still must learn to group sets using factors 4 and 5.

Based on the previous diagnosis of Susan's behavior, her performance on the unit pretest and, in particular, in the Skill 1 section, and Susan's work on these materials, she was assigned the following on 3/5:

Page	Reason
11	Practice on different arrangements of sets using factors 4 & 5.
13	Practice on different arrangements of sets using factors 4 & 5.

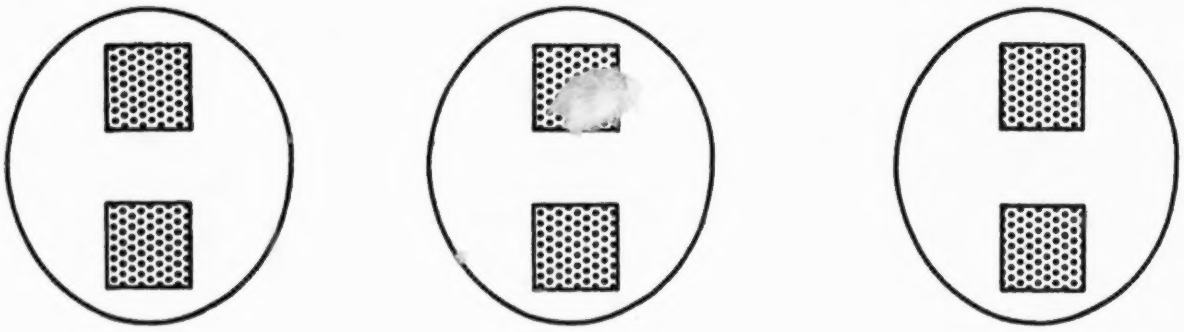
Estimate of time needed: 1 class period

Recheck these two pages.

Record these pages and date on the Prescription Sheet.

TO THE STUDENT

This picture shows ____ sets of ____ things.



How many things are there altogether?

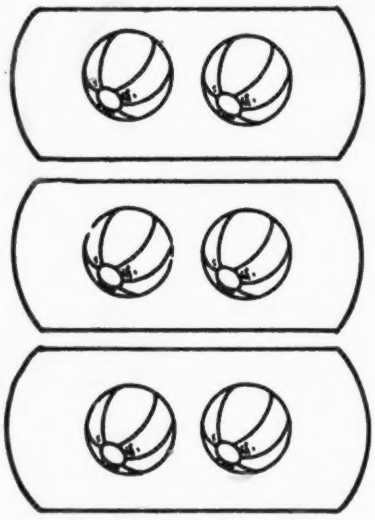
____ sets of ____ things = ____ things

In this booklet you will do multiplication problems with the aid of pictured sets.

Answers

3	2	3	2	6

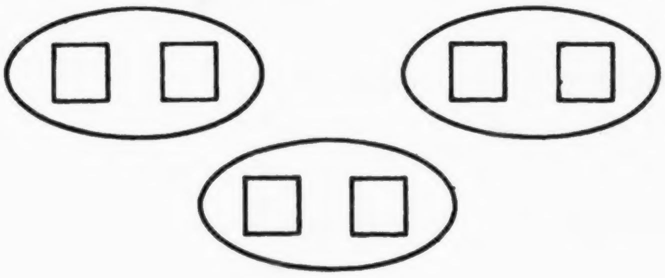
Write the correct answers in the blanks.



How many sets are circled? 3

How many balls in each set? 2

3 × 2 means 3 sets of 2

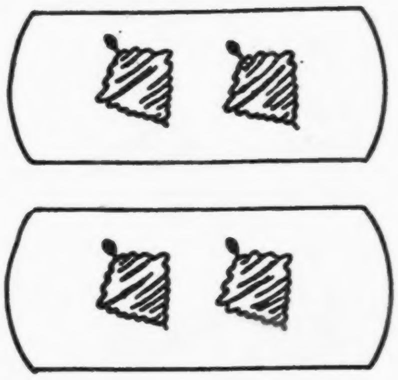


How many sets are circled? 3

How many squares in each set? 2

3 sets of 2 can be written as 3X2

Write the correct answers in the blanks.

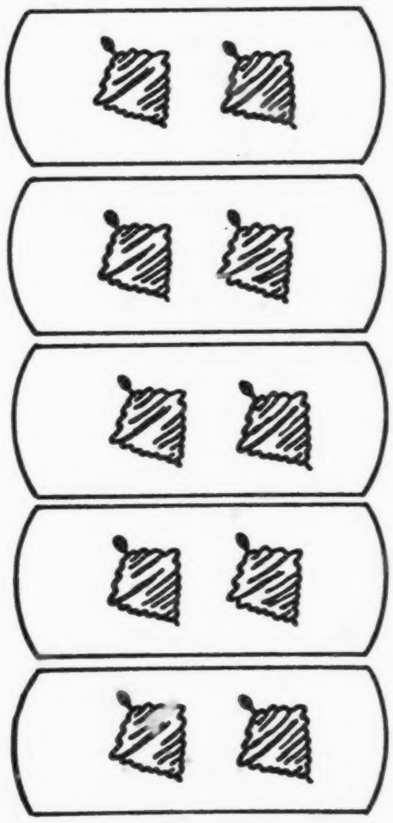


How many sets are circled? 2

How many tops are in each set? 2

How many tops altogether? 4

2 sets of 2 can be written as 2X2



How many sets are circled? 5

How many tops are in each set? 2

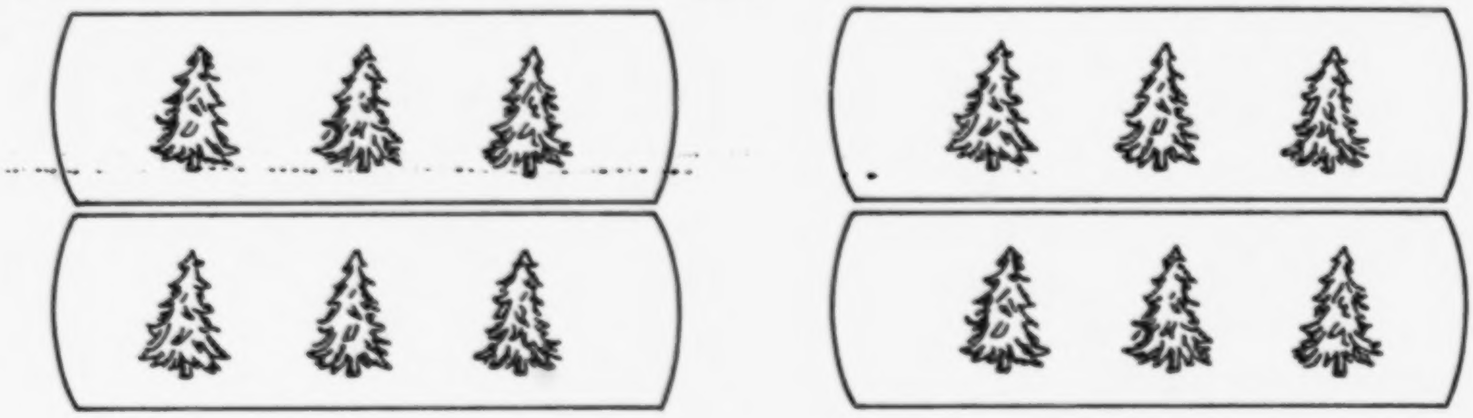
How many tops altogether? 10

5 sets of 2 can be written as 5X2

For extra practic do Page 18.

Look at the sets.

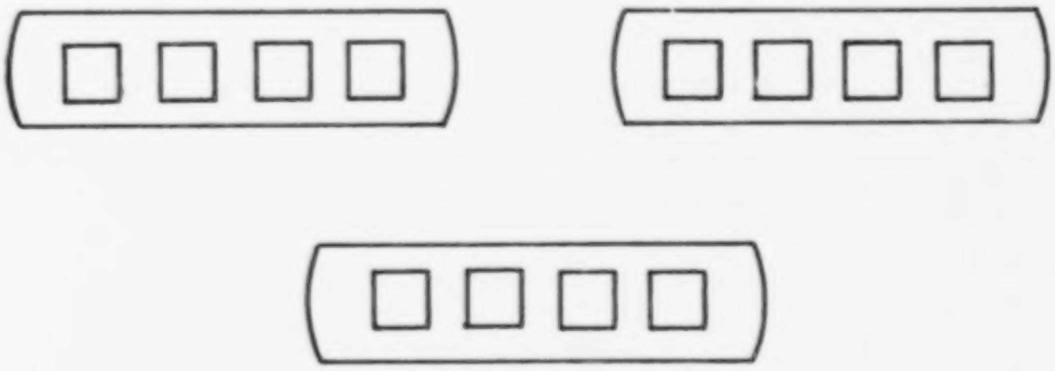
Write the correct answer in each blank.



4 sets of 3

or

4 × 3 or 4 "times" 3



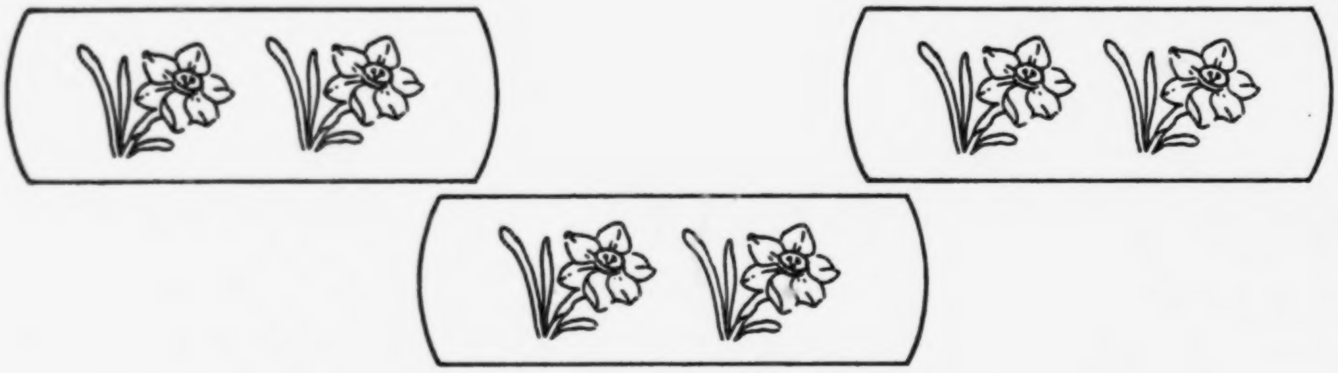
3 sets of 4

or

3× 4

For extra practice, do Page 19.

Write the correct answers in the blanks.



This picture shows 3 sets of 2.

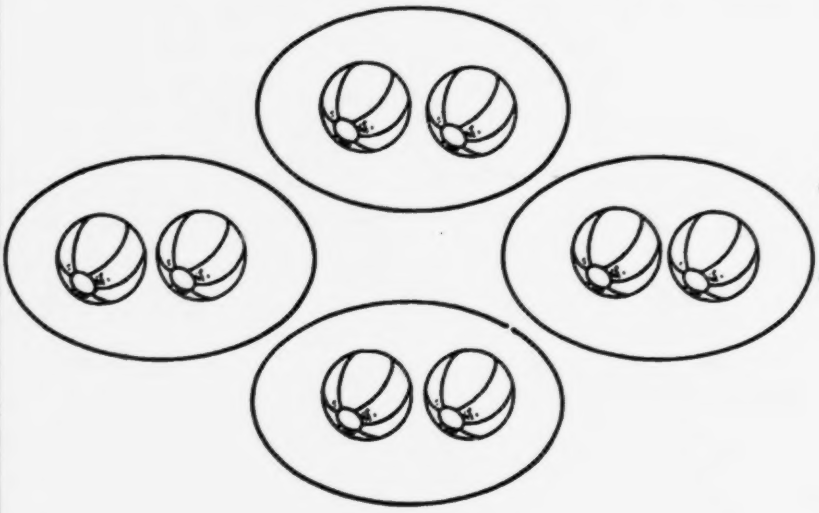
How many things altogether? 6

3 sets of 2 = 6. Write this as 3 × 2 = 6, and say 3 "times" 2 equals 6.

This is called multiplication.

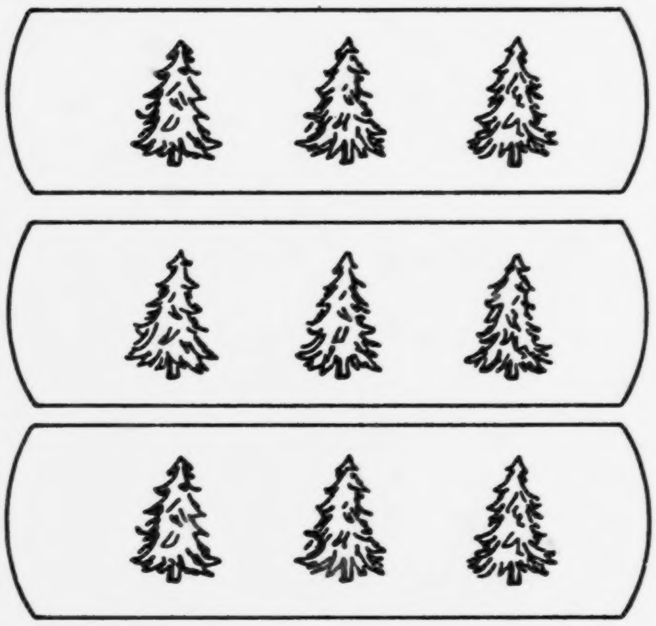
3 × 2 = 6 is a multiplication equation.

Write a multiplication equation for each picture.



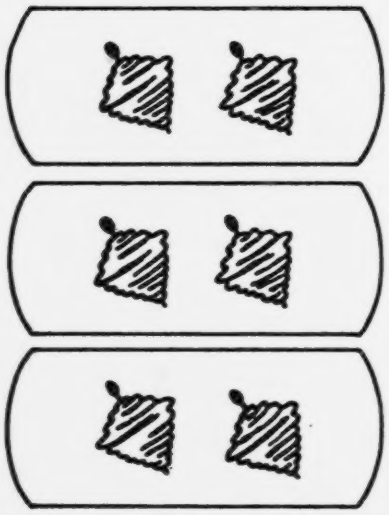
4 sets of 2 = 4 × 2

4 × 2 = 8



3 sets of 3 = 3 × 3

3 × 3 = 9



3 sets of 2 = 3 × 2

3 × 2 = 6

For extra practice, do Page 21.

These are the two skill sheets completed by Susan and corrected by the Aide.

Record (in role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets.

Susan can: Group sets using factors 4 & 5.

Susan cannot: ______

Describe how Susan worked with the prescription: Continues to request excessive amount of teacher approval.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Revise original prescription
_____ Extend the prescription
X Assign a CET for Skill 1

Why: Work on skill sheet indicates mastery of Skill 1.

Based on the previous diagnosis of Susan's behavior, her performance on the unit Pretest and, in particular, in the Skill 1 section, and Susan's work on these materials, she was assigned the following on 3/6:

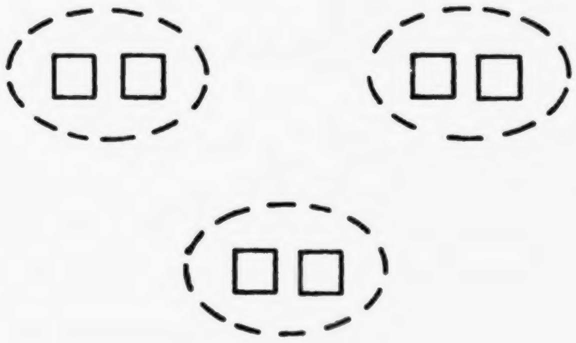
Page	Reason
16	CET to test mastery of Skill 1

Estimate of time needed: 20 minutes maximum.

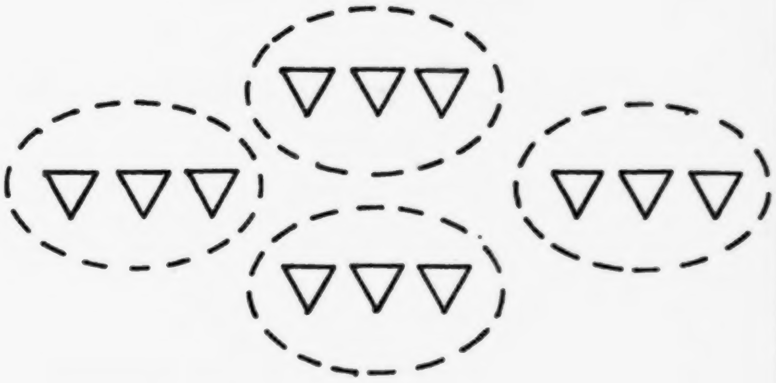
Recheck this CET.

Record the page and date on the Prescription Sheet.

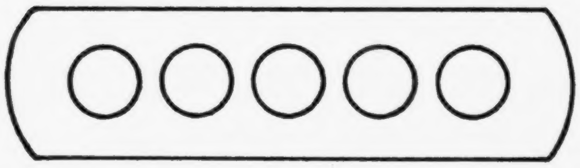
Count how many objects there are altogether and write the correct answers in the blanks.



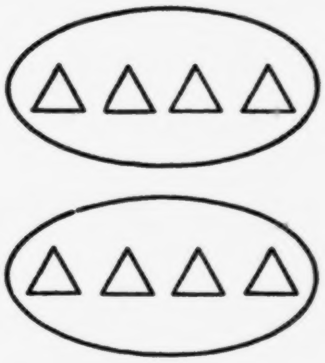
3 × 2 = 6



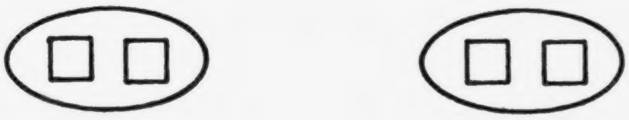
4 × 3 = 12



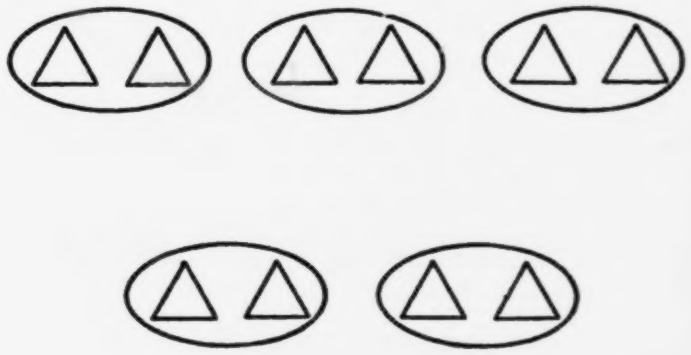
1 × 5 = 5



2 × 4 = 8



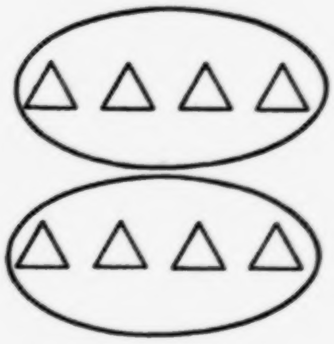
2 × 2 = 4



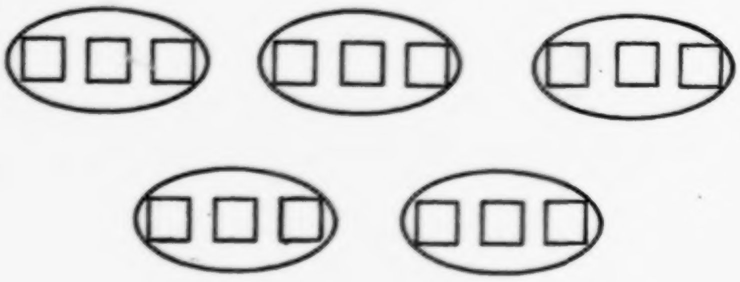
5 × 2 = 10

Page 13

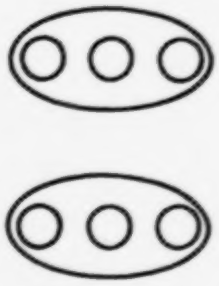
Write the multiplication equation for each picture.



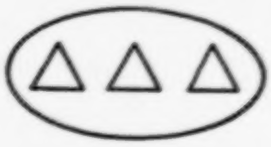
2 × 4 = 8



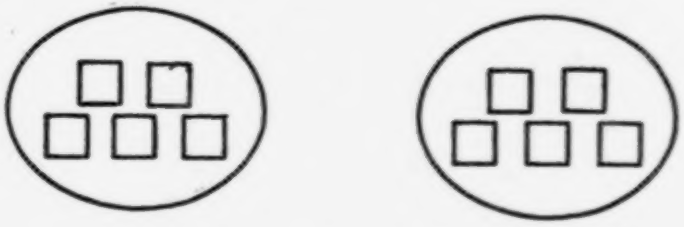
5 × 3 = 15



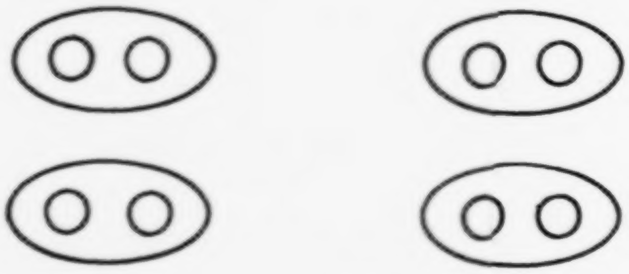
2 × 3 = 6



1 × 3 = 3



2 × 5 = 10



4 × 2 = 8

For extra practice, go to Page 23.

This is the CET completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the CET.

Susan can: Part I - Group different sets using factors 2-5. Part II - Susan demonstrates possible mastery of Skill 2 even though Pretest score for this skill was 0%.

Susan cannot: ______________________________

Describe how Susan worked with the prescription: Susan requested teacher approval. When directed to work independently, Susan was able to do so.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Extend prescription for the same skill.

_____ Assign a second CET for the same skill.

X Assign entire CET for Skill # 2 .

_____ Assign Part II of CET for Skill #____.

_____ Write initial prescription for Skill #____.

Why? To determine if Susan has mastered Skill 2 while mastering Skill 1.

Based on the previous diagnosis of Susan's behavior, her performance on the unit Pretest (Skill 2, in particular), and Part II of CET for Skill 1, she was assigned the following on 3/6:

Page	Reason
16 P	CET to test mastery of Skill 2.

(P = CET pad)

Estimate of time needed: 20 minutes maximum.

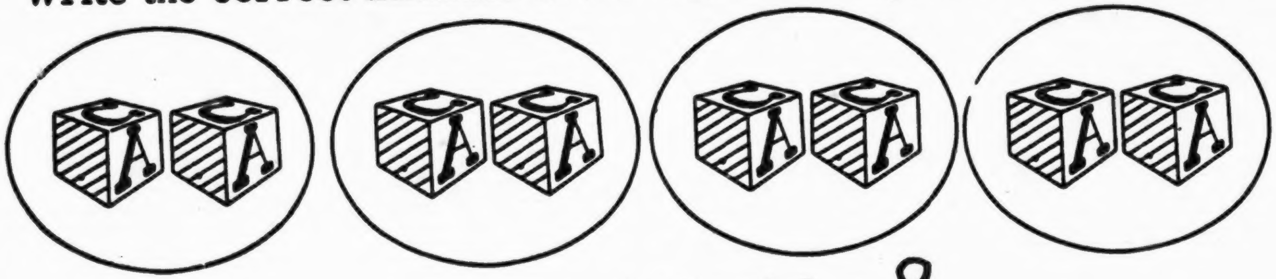
Examine the objective for Skill 2 and recheck this CET (Skill 2 STS booklet).

Record the page and date on the Prescription Sheet.

CET I

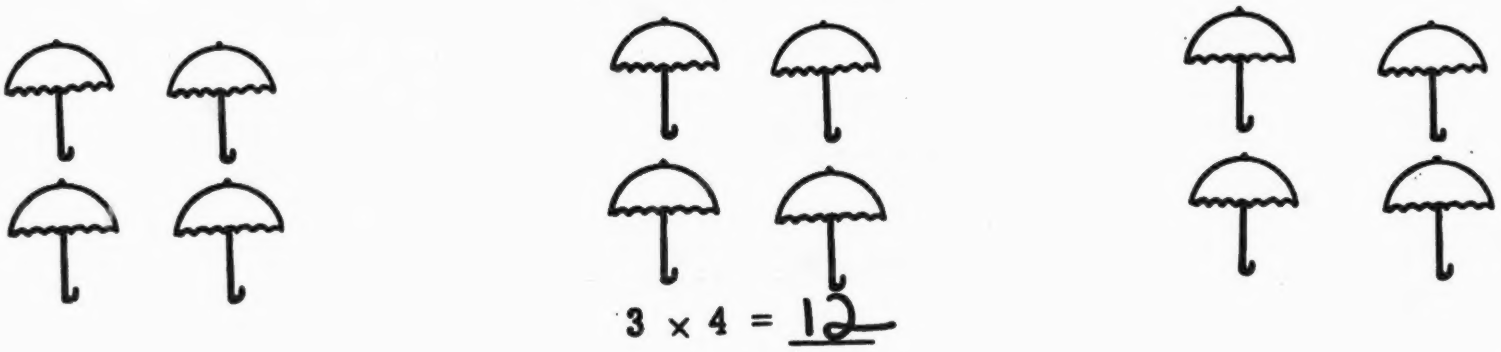
CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 4]	[✓ 100%]
	NO. OF PTS.	-
	3	75
	2	50
	1	25

Write the correct numeral in the blank to complete each equation.

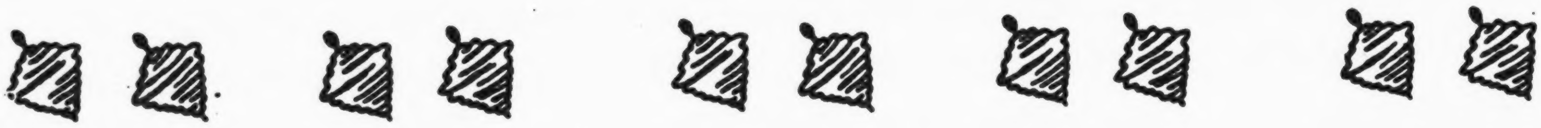


4 sets of 2 = 8

2 sets of 3 = 6



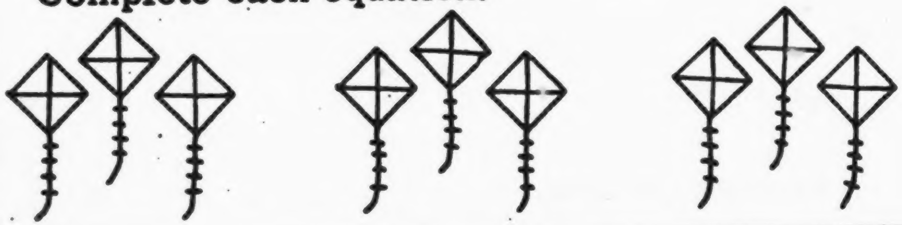
3 × 4 = 12



5 × 2 = 10

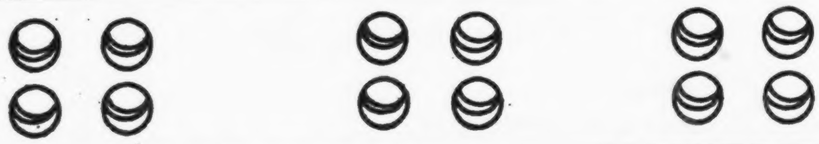
CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 4]	[✓ 100%]
	NO. OF PTS.	%
	3	75
	2	50
	1	25

Complete each equation.



3 + 3 + 3 = 9

3 × 3 = 9



4 + 4 + 4 = 12

3 × 4 = 12

This is the Skill 2 CET completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the CET.

Susan can: Part I - Use repeated addition to solve multiplication problems up to 5 x 10.

Part II - Complete multiplication examples using factors of 0, 1.

Susan cannot: ____________________

Describe how Susan worked with the prescription: Susan obtained and completed the CET independently.

Based on your analysis of Susan's work, you decide to: (check one)

- _____ Extend prescription for same skill.
- _____ Assign a second CET for the same skill.
- __X__ Assign entire CET for Skill # 3 .
- _____ Assign Part II of CET for Skill #____.
- _____ Write initial prescription for Skill #____.

Why? Pretest score (Skill 3) was 100%; Part II of this CET was near mastery; past performance indicates Susan's mastery of this skill; teacher judgment accepts the 83% as high probability of mastery.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 3, in particular), and Part II of CET for Skill 2, she was assigned the following on 3/7:

Brief pupil-teacher conference to discuss completed CET.

Page	Reason
17 P	CET to test mastery of Skill 3.

Estimate of time needed: 20 minutes maximum.

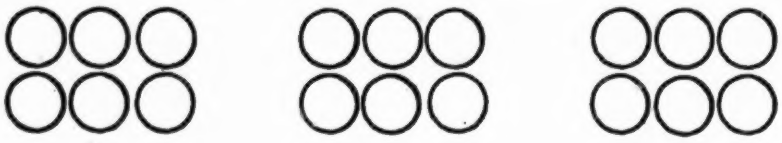
Examine the objective for Skill 3 and recheck this CET (Skill 3 STS booklet).

Record the page and date on the Prescription Sheet.

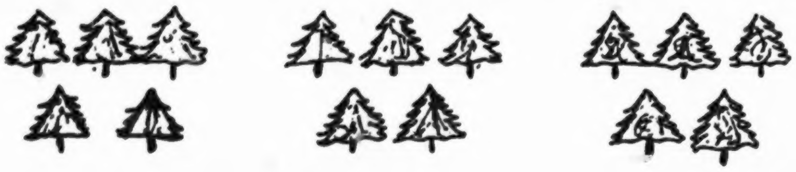
CET I

Solve each equation.

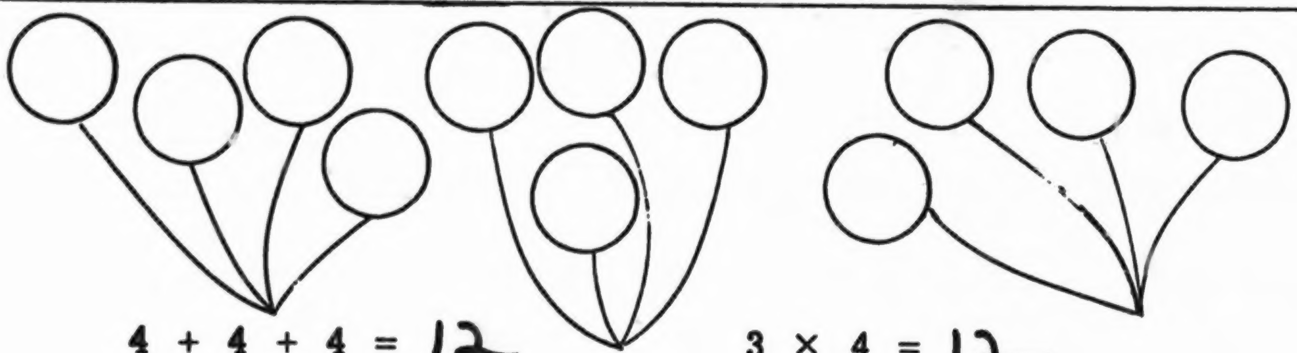
CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 8]	[✓ 100%]
	NO. OF PTS.	%
	7	88
	6	75
	5	63
	4	50
	3	38
	2	25
	1	13



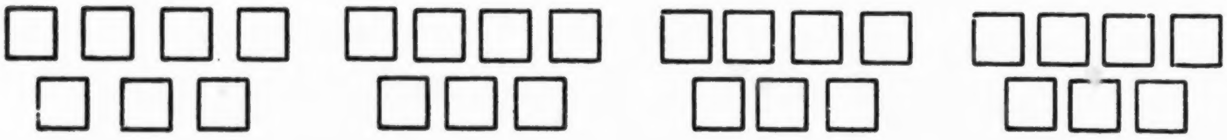
6 + 6 + 6 = 18 3 × 6 = 18



5 + 5 + 5 = 15 3 × 5 = 15



4 + 4 + 4 = 12 3 × 4 = 12



7 + 7 + 7 + 7 = 28 4 × 7 = 28

Multiply.

4 × 1 = 4 6 × 0 = 0

8
× 1
8

~~7~~
~~× 0~~
~~7~~

3
× 1
3

8
× 0
0

CIRCLE CORRECT BOX	TL. PTS.	
	6	100%
	NO. OF PTS.	%
	[✓ 5]	[✓ 83]
	4	67
	3	50
	2	33
	1	17

This is the Skill 3 CET completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the CET.

Susan can: Part I - Complete multiplication problems using factors 0, 1.

Susan cannot: Complete multiplication problems using factors 2-5 without pictured sets.

Describe how Susan worked with the prescription: Susan worked independently on Part I; requested constant help on Part II.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Extend prescription for same skill.
_____ Assign a second CET for the same skill.
_____ Assign entire CET for Skill #____.
_____ Assign Part II of CET for Skill #____.
X Write initial prescription for Skill # 4 .

Why? Part II of CET indicates no mastery of Skill 4; Pretest score (15%) substantiates this.

Before writing the prescription for Skill 4, compare your prescription with the model Prescription Sheet on page 243. This Prescription Sheet contains all the information entered to this point.

CET I

Multiply.

9	1	7	10
× 1	× 1	× 0	× 0
9	1	0	0

C I R C L E C O R R E C T B O X	TL. PTS.	
	[✓ 12]	[✓ 100%]
	NO. OF PTS.	%
	11	92
	10	83
	9	75
	8	67
	7	58
	6	50
	5	42
	4	33
	3	25
	2	17
	1	8

0	1	4	1
× 1	× 10	× 1	× 5
0	10	4	5

0 × 3 = 0

3 × 1 = 3

1 × 7 = 7

1 × 6 = 6

Multiply.

2	3	6	5
× 5	× 2	× 4	× 3
X	X	X	X

C I R C L E C O R R E C T B O X	TL. PTS.	
	7	100%
	NO. OF PTS.	%
	6	86
	5	71
	4	57
	3	43
	2	29
	1	14
	[✓ 0]	[✓ 0]

3	6	4
× 4	× 2	× 4
X	X	X

Review the information on the model sheet to get a total picture of Susan's progress.

Check your Prescription Sheet against this model.

If the information on your sheet is recorded incorrectly, refer to the point in these materials where you made your error by using the page references on the model.

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF ▨

SCHOOL STAMP | U. S. 2-3

STUDENT NAME Susan Markham

STUDENT NUMBER	1	2	3	4
U. S.	4	5	6	7

GRADE 4 U. S. 9

ROOM 102

UNIT D-Mult. 1,2,4,5,7

U.

UNIT DATES		
UNIT BEGAN	3/3	U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

BEG
END
Wor

Development of Prescription

Page References ↓

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	3/3	MB	1	Read Student Page										192
2				2		6	6					SD		
3				3		8	8					SD	1	
4				4		6	6					JW		
5				5		5	5					JW		
6				8		6	6					JW	2	
7	3/5	MB	1	11		6	6					SD		226
8				13		18	18					SD	3	
9	3/6	MB	1	16	CET			4/4	100	4/4	100	JW	4	233
10	3/6	MB	2	16P	CET			8/8	100	5/6	83	JW	1	236
11	3/7	MB	3	17P	CET			12/12	100	0/7	0	SD	1	238
12														
13														
14														
15														
16														
17														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW

PUNCH SAMPLE

PRE % U. 32-33	POST. % U. 34-35	TO 78
80	95	

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER ▼	ENTER POINTS PER SKILL	PRE	% ▼	POST	% ▼	POST	% ▼	POST	% ▼
X ①	5	3	60						
X									
X ②	5	0	0						
X									
X 3	8	8	100						
X									
X ④	20	3	15						
X									
X ⑤	5	0	0						
X									
X 6	5	2	40						
X									
X ⑦	5	0	0						
X									
X 8	5	5	100						

This is a copy of the STS booklet for Skill 4. Examine all the skill sheets and STS sheets (pp. 12 & 13) in the booklet to become familiar with the materials for this skill.

Based on the diagnosis of Susan's behavior, her progress to this point, her performance on the Pretest (Skill 4, in particular), and Part II of CET for Skill 3, she was assigned the following on 3/7:

Page	
Student Page	Introduces skill; previews work
1	Multiplication equations using factors 0-2
2	Multiplication equations using factors 3-5
3	Additional practice equations using factors 1-5
*12R 09	Disc on using factor of 3 in multiplication equations
13R	Disc on timed practice of 3's multiplication table.

*Code 09 (records) tells Susan to use discs with these skill sheets and guides her to the location of the materials she needs for this prescription.

Estimate of time needed: 2 class periods.

Recheck these 5 pages and the 2 disc scripts.

Record these pages on the Prescription Sheet.

SCHOOL CODE

NAME

NUMBER CLASS

ipi
individually prescribed instruction
MATHEMATICS

Standard Teaching Sequence Booklet

TEACHING EDITION
LEVEL D
MULTIPLICATION (05)
SKILL 4

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

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DEVELOPMENTAL EDITION

TO THE STUDENT

Can you do these problems? Write your answers in the blanks.

$4 \times 2 = \_\_\_\_$

$3 \times 4 = \_\_\_\_$

$$\begin{array}{r} 5 \\ \underline{\times 1} \\ \_\_\_\_ \end{array}$$

$$\begin{array}{r} 3 \\ \underline{\times 9} \\ \_\_\_\_ \end{array}$$

You will practice problems like these in this booklet.

Answers

8, 12

5, 27

1

Complete each equation.

0 × 0 = 0
0 × 1 = 0
0 × 2 = 0

1 × 0 = 0
1 × 1 = 1
1 × 2 = 2

2 × 0 = 0
2 × 1 = 2
2 × 2 = 4

3 × 0 = 0
3 × 1 = 3
3 × 2 = 6

4 × 0 = 0
4 × 1 = 4
4 × 2 = 8

5 × 0 = 0
5 × 1 = 5
5 × 2 = 10

Complete each equation.

$0 \times 3 = 0$ $0 \times 4 = 0$ $0 \times 5 = 0$

$1 \times 3 = 3$ $1 \times 4 = 4$ $1 \times 5 = 5$

$2 \times 3 = 6$ $2 \times 4 = 8$ $2 \times 5 = 10$

$3 \times 3 = 9$ $3 \times 4 = 12$ $3 \times 5 = 15$

$4 \times 3 = 12$ $4 \times 4 = 16$ $4 \times 5 = 20$

$5 \times 3 = 15$ $5 \times 4 = 20$ $5 \times 5 = 25$

Write the answers.

3 × 2 = 6

4 × 1 = 4

5 × 5 = 25

5 × 3 = 15

2 × 5 = 10

3 × 4 = 12

2 × 4 = 8

1 × 1 = 1

4 × 2 = 8

5 × 4 = 20

Write the answers.

4 × 4 = 16

5 × 1 = 5

2 × 3 = 6

3 × 3 = 9

4 × 3 = 12

4 × 5 = 20

2 × 2 = 4

3 × 5 = 15

5 × 2 = 10

3 × 1 = 3

For extra practice, do Page 9.

Write the answers.

$\begin{array}{r} 1 \\ \times 1 \\ \hline 1 \end{array}$	$\begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array}$	$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$	$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$
$\begin{array}{r} 4 \\ \times 4 \\ \hline 16 \end{array}$	$\begin{array}{r} 5 \\ \times 5 \\ \hline 25 \end{array}$	$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array}$	$\begin{array}{r} 0 \\ \times 4 \\ \hline 0 \end{array}$
$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}$	$\begin{array}{r} 5 \\ \times 1 \\ \hline 5 \end{array}$	$\begin{array}{r} 4 \\ \times 1 \\ \hline 4 \end{array}$	$\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$
$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \end{array}$	$\begin{array}{r} 2 \\ \times 1 \\ \hline 2 \end{array}$	$\begin{array}{r} 0 \\ \times 3 \\ \hline 0 \end{array}$	$\begin{array}{r} 6 \\ \times 1 \\ \hline 6 \end{array}$

Write the answers.

$$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array} \qquad \begin{array}{r} 5 \\ \times 5 \\ \hline 25 \end{array} \qquad \begin{array}{r} 4 \\ \times 5 \\ \hline 20 \end{array} \qquad \begin{array}{r} 6 \\ \times 5 \\ \hline 30 \end{array}$$

$$\begin{array}{r} 9 \\ \times 3 \\ \hline 27 \end{array} \qquad \begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array} \qquad \begin{array}{r} 0 \\ \times 10 \\ \hline 0 \end{array} \qquad \begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array}$$

$$\begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array} \qquad \begin{array}{r} 9 \\ \times 2 \\ \hline 18 \end{array} \qquad \begin{array}{r} 7 \\ \times 5 \\ \hline 35 \end{array} \qquad \begin{array}{r} 7 \\ \times 4 \\ \hline 28 \end{array}$$

$$\begin{array}{r} 8 \\ \times 3 \\ \hline 24 \end{array} \qquad \begin{array}{r} 6 \\ \times 3 \\ \hline 18 \end{array} \qquad \begin{array}{r} 7 \\ \times 1 \\ \hline 7 \end{array} \qquad \begin{array}{r} 6 \\ \times 0 \\ \hline 0 \end{array}$$

Write the answers.

8 × 6 48	0 × 9 0	4 × 2 8	9 × 5 45
7 × 6 42	7 × 7 49	5 × 5 25	10 × 5 50
5 × 10 50	10 × 3 30	8 × 4 32	8 × 0 0
9 × 4 36	7 × 3 21	8 × 2 16	10 × 3 30
10 × 2 20	8 × 4 32	10 × 1 10	10 × 0 0

For extra practice do Page 10.

CET I

CIRCLE CORRECT BOX	TL. PTS.	
	21	100%
	NO. OF PTS.	%
	20	95
	19	90
	18	86
	17	81
	16	76
	15	71
	14	67
	13	62
	12	57
	11	52
	10	48
	9	43
	8	38
	7	33
	6	29
	5	24
	4	19
	3	14
	2	10
	1	5

Multiply.

3	2	9	7	4
×4	×5	×3	×2	×4
___	___	___	___	___
8	6	9	7	5
×2	×5	×4	×3	×3
___	___	___	___	___
8	7	3	2	6
×5	×4	×2	×4	×3
___	___	___	___	___

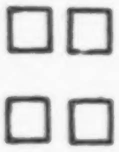
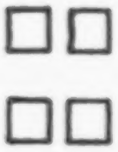
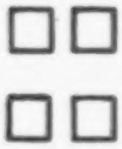
4 × 8 = ___ 5 × 7 = ___

3 × 5 = ___ 4 × 5 = ___

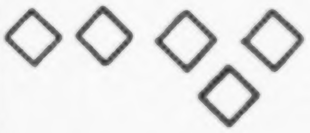
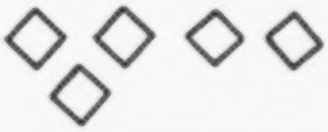
2 × 6 = ___ 3 × 3 = ___

Fill in the blank to make a true number sentence.

CIRCLE CORRECT BOX	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

3 × ___ = 12

___ × 5 = 10

Write the correct answers.

5 × 4 = 20

5 × 5 = 25

2 × 3 = 6

3 × 3 = 9

3 × 4 = 12

4 × 2 = 8

2 × 1 = 2

5 × 3 = 15

4 × 4 = 16

1 × 1 = 1

Write the answers.

$$\begin{array}{r} 0 \\ \times 10 \\ \hline 0 \end{array} \qquad \begin{array}{r} 6 \\ \times 8 \\ \hline 48 \end{array} \qquad \begin{array}{r} 5 \\ \times 3 \\ \hline 15 \end{array} \qquad \begin{array}{r} 4 \\ \times 4 \\ \hline 16 \end{array}$$

$$\begin{array}{r} 10 \\ \times\ 5 \\ \hline 50 \end{array} \qquad \begin{array}{r} 9 \\ \times 4 \\ \hline 36 \end{array} \qquad \begin{array}{r} 5 \\ \times 5 \\ \hline 25 \end{array} \qquad \begin{array}{r} 2 \\ \times 10 \\ \hline 20 \end{array}$$

$$\begin{array}{r} 6 \\ \times 6 \\ \hline 36 \end{array} \qquad \begin{array}{r} 5 \\ \times 4 \\ \hline 20 \end{array} \qquad \begin{array}{r} 3 \\ \times 6 \\ \hline 18 \end{array} \qquad \begin{array}{r} 9 \\ \times 3 \\ \hline 27 \end{array}$$

$$\checkmark \begin{array}{r} 5 \\ \times 0 \\ \hline 0 \end{array} \qquad \begin{array}{r} 4 \\ \times 10 \\ \hline 40 \end{array} \qquad \begin{array}{r} 3 \\ \times 7 \\ \hline 21 \end{array} \qquad \begin{array}{r} 5 \\ \times 3 \\ \hline 15 \end{array}$$

CET II

CIRCLE CORRECT BOX	TL. PTS.	
	21	100%
	NO. OF PTS.	%
	20	95
	19	90
	18	86
	17	81
	16	76
	15	71
	14	67
	13	62
	12	57
	11	52
	10	48
	9	43
	8	38
	7	33
	6	29
	5	24
	4	19
	3	14
	2	10
	1	5

Multiply.

6	10	8	8	10
×5	× 4	×3	×2	× 3
___	___	___	___	___
7	6	6	9	7
×2	×4	×2	×3	×4
___	___	___	___	___
7	5	3	7	5
×5	×5	×2	×3	×3
___	___	___	___	___

5 × 8 = ___

4 × 3 = ___

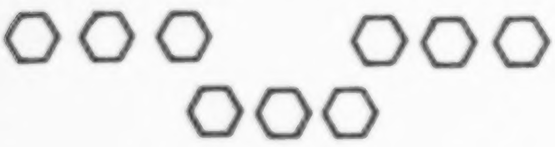
5 × 4 = ___

3 × 8 = ___

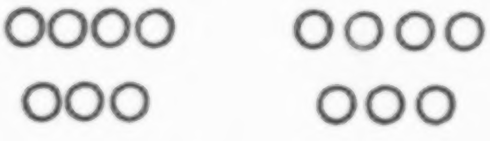
2 × 9 = ___

4 × 4 = ___

Put the correct numeral in the blank.



___ × 3 = 9



2 × ___ = 14

CIRCLE CORRECT BOX	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

LEVEL D, MULTIPLICATION, SKILL 4 Page 12

OBJECTIVE: Finds products to demonstrate oral and written mastery of multiplication (without pictures). Factors of 2, 3, 4, and 5 tables.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Multiplies horizontally with products to 10.	
2.	Multiplies horizontally with products to 25.	
3.	Multiplies horizontally with products to 25.	
4.	Multiplies horizontally with products to 20.	9
5.	Multiplies factors vertically with products to 25.	
6.	Multiplies vertically with products to 40.	
7.	Multiplies vertically with products to 50.	10
8.	CET I.	
	CET II.	11

Circle pages that are to be done.

Standard Teaching Sequence, Con't.

1967 - 68

Sequence No.	Prescription No.	
12R		Solves multiplication problems using 3 as a factor. Uses repeated addition in part A but not B.
13R		Writes 3's multiplication facts. Answers 3's multiplication facts orally within decreasing time limits.
14R		Solves problems using 4 as a factor. Uses repeated addition to answer multiplication problems in Part A.
15R		Writes the 4's multiplication table up to 10. Answers 4's multiplication facts orally within decreasing time limits.
16R		Solves problems using 5 as a factor. Uses repeated addition for help in Part A but not Part B.
17R		Writes the 5's multiplication facts up to 10. Answers 5's multiplication facts orally within decreasing time limits.
18R		Timed test. Writes answers to multiplication facts from the 1 - 5 multiplication tables.
19R		Same as 18R.

Teaching Aids:

Assorted flashcards
Multo Game
Dominoes
Imma Whiz Game
Assorted Counting Aids - abacus, beads, sticks

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 Elementary Mathematics - 3		191, 252

Math Script

Objective: D-Mult-4-12R

Purpose: Oral and written work for introducing or reinforcing the 3's multiplication table. Uses repeated addition to solve multiplication problems.

Note to Recorder: Emphasize underlined words.

Title: Multiplication Facts: 3's Table

Hi - how are you today? (pause) Let's have a contest. Pretend that someone put 3 cases of matchbox cars with 7 cars in each case on your desk. That is 3 groups of 7. I bet I can tell how many cars there are altogether before you can! Go - (3 second pause) There are 21 matchbox cars altogether. I knew that answer right away because when I was in D-Multiplication I studied my multiplication facts real well! 3 groups of 7 is the multiplication fact: 3 times 7 equals 21. On this tape you are going to study the 3's multiplication facts. After you practice them for a while you will be able to do them quickly and maybe win some arithmetic contests yourself!

Put your name, room and the date at the top of your workpage. BELL When you do the 3's multiplication facts you are really adding a number 3 times. Put your finger on the first problem in Part A. (pause) It is 3 times 1. Now move your finger across the page to the addition problem. You know the sum of 1 plus 1 plus 1. What is it? (pause) 3. Write a 3 in the space. BELL A shorter way of adding one - 3 times is to multiply 3 times 1. Move your finger back to the multiplication problem. 3 times 1 is just a shorter way of adding one - 3 times, so 3 times 1 equals 3. Write a 3 in the space. BELL 3 times 1 equals 3.

Look at problem number 2. You can find out what 3 times 2 equals by adding two - 3 times. What does 2 plus 2 plus 2 equal? (pause) 6.

KF

Write a 6 in the blank beside the addition problem. BELL 2 + 2 + 2 equals 6 so 3 times 2 equals 6 also. Write the answer on the space after 3 x 2. BELL

For the rest of Part A, look at the multiplication problem but solve the addition problem first, because you already know repeated addition. Then you can answer the multiplication problems.

I'll do number 3 with you. 3 times 3 is a short way of adding three - 3 times. 3 plus 3 plus 3 equals what? (pause) 9. So, 3 times 3 equals 9 also. Fill in the blanks and do the rest of Part A in the *same* way. BELL

Let's check Part A starting at number 4 where I left you. 4 + 4 + 4 = 12 so, 3 x 4 = 12. (pause) 5 + 5 + 5 = 15, so 3 x 5 = 15 too. (pause) 6 + 6 + 6 = 18, so 3 x 6 = 18. (pause) 7 + 7 + 7 = 21, so 3 x 7 = 21 also. (pause) 8 + 8 + 8 = 24, so 3 x 8 = 24. (pause) 9 + 9 + 9 = 27, so 3 x 9 = 27. (pause) 10 + 10 + 10 = 30, so 3 x 10 = 30. (pause)

Now put your hand over the addition problems. I am going to say each of the 3's multiplication facts and you repeat after me. Look at the fact as you say it *out loud*. 3 times 1 equals *3*. (long pause) 3 times 2 equals *6*. (long pause) 3 x 3 = *9*. (long pause) 3 x 5 = *15* (long pause) 3 x 6 = *18*.(long pause) 3 x 7 = *21*. (long pause) 3 x 8 = *24*. (long pause) 3 x 9 = *27*. (long pause) 3 x 10 = *30*. (long pause)

Do the problems in Part B *without* changing them into addition problems. Use Part A if you need help. BELL

Now you know what the 3's multiplication table is - all you need is a lot of practice. Practice is the most important part. So, if someone ever says "There are 3 cases of matchbox cars with 7 cars in each case. How many matchbox cars are there altogether?" Right away you'll be able to say "21" because you know that 3 times 7 equals 21. Then you'll be a champ!

Put this disc in its proper place and take your workpage to an Aide. So long! BELL

Math Script

Objective: D-Mult-4-13R

Purpose: To give child oral practice (drill) in the 3's multiplication table. Repeated addition is not used. Exercises are timed with decreasing time limits. The child should have had tape D-Mult-4-12R first.

Notes to Recorder: Emphasize underlined words. Note that pauses are timed from middle of script to end.

Title: Multiplication Drill of the 3's Table

Hello - how are you today? (pause) On this disc you are going to practice the 3's multiplication facts. It is very important that you learn to answer the problems as fast as possible. Later on you will be able to figure out how many matchbox cars you have and still have loads of time to play with them. Or figure out how many cookies are in a package and still have time to eat your share of them. So work hard at this tape and the other ones like it and you'll have lots of time by knowing your multiplication facts.

First let's review the 3's multiplication facts. Write each problem on your worksheet as I say it, then write the answer. 3 times 1 equals -- trace over 3 times 1 equals. BELL Answer? (pause) 3. 3 times 2 equals. BELL 3 x 2 = 6. 3 x 4 = BELL 3 x 4 = 12 3 x 5 = BELL 3 x 5 = 15 3 x 6 = BELL 3 x 6 = 18 3 x 7 = BELL 3 x 7 = 21 3 x 8 = BELL 3 x 8 = 24 3 x 9 = BELL 3 x 9 = 27 3 x 10 = BELL 3 x 10 = 30.

Turn your workpage over (long pause). We are going to play a game. I will say a 3's multiplication fact and you will have time to say the answer out loud. Try to say the answer before I do. I will go slowly and you will have lots of time to answer the first couple of problems. Let' try some. 3 x 3 equals (10 sec. pause) 9. 3 x 10 equals (10 sec. pause) 30. Here's a harder one: 3 x 9 equals (10 sec. pause) How are you doing? (pause) You have 2 choices

KF

now: you can either turn your workpage over and study the facts some more, or keep the tape on and say the answers a little bit faster because the game is speeding up. BELL Make sure the workpage is turned over. Here we go! 3 x 5 equals (8 sec. pause) 15. 3 x 7 equals (8 sec. pause) 21. 3 x 1 = (8 sec. pause) 3. 3 x 6 equals (8 sec. pause) 18. 3 x 3 = (8 sec. pause) 9. 3 x 8 equals (8 sec. pause) 24. 3 x 4 equals (8 sec. pause) 12.

Now we are going to go even faster. If you haven't been answering quickly enough start the tape over and go through the drills again. BELL I hope you are ready for the next drill. Just listen.(4 sec. pause) That is how much time you will have to say each answer out loud. That's a lot of time when you think about it, but you have to know your multiplication facts. Keep cool; answer quickly and correctly. Let's go -- 3 x 2 equals (4 sec. pause) 6. 3 x 9 equals (4 sec. pause) 27. 3 x 4 equals (4 sec. pause) 12. 3 x 6 equals (4 sec. pause) 18. 3 x 3 equals (4 sec. pause) 9. 3 x 7 equals (4 sec. pause) 21. 3 x 10 equals (4 sec. pause) 30. 3 x 5 equals (4 sec. pause) 15. 3 x 1 equals (4 sec. pause) 3. 3 x 8 equals (4 sec. pause) 24. Can you go faster? 3 x 9 equals (3 sec. pause) 27. 3 x 4 equals (3 sec. apuse) 12. 3 x 6 equals (3 sec. pause) 18. 3 x 3 equals (3 sec. pause) 9. 3 x 7 equals (3 sec. pause) 21. 3 x 10 equals (3 sec. Pause) 30. 3 x 5 equals (3 sec. pause) 15. 3 x 1 equals (3 sec. pause) 3. 3 x 8 equals (3 sec. pause) 24. 3 x 2 equals (3 sec. pause) 6. Wow! That was hard work!

The faster you can answer these multiplication facts the faster you will be able to solve problems using them. Come back again and use this tape whenever you want to practice the 3's multiplication table. Put this disc away and take your workpage to the teacher Good-bye. BELL

Math Script

jective: D-Mult-4-14R

Purpose: To give an oral approach to studying the 4's multiplication table. It may be an introduction or for extra practice.

Notes to Recorder: Emphasize underlined words.

Title: Multiplication Facts: 4's Table

Hello! Let's pretend you are the popsicle-man for a few minutes. When you stop your truck, 4 little children each give you 7 cents for a popsicle. After you give them the popsicles, you count all the money the children gave you. 7 cents plus 7 cents plus 7 cents plus 7 cents equals how much? (pause) 28 cents.

The real popsicle man does this much faster because he uses the multiplication facts. He says to himself: "4 children gave me 7 cents each. I have 4 groups of 7. So this is the multiplication fact 4 times 7. I know 4 times 7 equals 28, so I have 28 cents." The popsicle man learned the tables of multiplication when he was your age. Today you are going to study the 4's multiplication table.

Write your name, room and date at the top of the workpage. BELL You already know how to add the same number a couple of times. Multiplication is a short way of adding the same number over and over again.

Look at problem number 1 in Part A. Write the sum of 1 plus 1 plus 1 plus 1. BELL The sum is 4. Now move your pencil to the right. (pause) 4 times 1 is the multiplication fact that is the same as adding 1 - four times. What is the answer to the problem? (pause) 4. Write it down. BELL Look at problem number 2. Add 2 four times and write your answer. BELL 2 added 4 times equals 8. In multiplication this is the fact 4 times 2. You already answered the longer form of this problem. Write the answer to 4 times 2. BELL 4 times 2 equals 8. Do the rest of Part A. Solve the addition problem first to help you answer each multiplication fact. BELL

Let's check your answers starting with number 3: 3 plus 3 plus 3 plus 3 equals 12; 4 times 3 equals 12. Number 4: 4 + 4 + 4 + 4 = 16; 4 x 4 = 16. Number 5: 5 + 5 + 5 + 5 = 20; 4 x 5 = 20. Number 6: 6 + 6 + 6 + 6 = 24; 4 x 6 = 24. Number 7: 7 + 7 + 7 + 7 = 28; 4 x 7 = 28. Number 8: 8 + 8 + 8 + 8 = 32; 4 x 8 = 32. Number 9: 9 + 9 + 9 + 9 = 36; 4 x 9 = 36. Number: 10 + 10 + 10 + 10 = 40; 4 x 10 = 40. Put your pencil down and study the problems for a few minutes then turn me back on. BELL

Do Part B now, without changing the multiplication problems into addition problems. Try to do these problems as fast as you can to see how well you have learned the 4's multiplication facts. BELL Now you are finished. Be sure your name, room and the date are on the workpage and take it to an Aide. Put this disc back in its proper place.

So long! BELL

6

Math Script

Objective: D-Mult-4-15R

Purpose: To give child oral practice (drill) in the 4's multiplication table. Repeated addition is not used. Exercises are timed with decreasing time limits. The child should have had D-Mult-4-14R first.

Note to Recorder: Emphasize underlined words. Note that pauses are timed

Title: Multiplication Drill for the 4's Table

Hi there! Put your name, room and the date on the top of your workpage. BELL Today we are going to practice the 4's multiplication facts so that you can answer the problems in a snap. First, let's review the 4's multiplication facts. Write each problem on your worksheet as I say it, then write the answer. 4 times 1 equals - trace over the 4 times 1 equals BELL Answer? (pause) 4. 4 times 2 equals BELL 8 Next problem: 4 times 3 equals BELL 12. 4 times 4 equals BELL 16. 4 times 5 equals BELL 20. Next problem: 4 x 6 = BELL 24. 4 times 7 equals BELL 28. 4 x 8 = BELL 32. 4 x 9 equals BELL 36. 4 times 10 equals BELL 40.

Turn your workpage over. (long pause) We are going to play a game. I will say a 4's multiplication fact and you will have time to say the answer out loud. Try to say the answer before I do. I will go slowly and you will have lots of time for the first couple of problems. Let's try some. 4 times 3 equals (10 sec. pause) 12. 4 x 10 = (10 sec. pause) 40. Here's a harder one, 4 times 7 equals (10 sec. pause) 28. How are you doing? (pause) You have 2 choices now: you can turn your workpage over and study the facts some more or else you can keep the tape on and say the answers a little faster because the game is speeding up BELL Make sure your workpage is turned over Here we go: 4 x 5 = (8 sec. pause) 20. 4 x 9 = (8 sec. pause) 36. 4 x 1 = (8 sec. pause) 4.

4 x 6 = (8 sec. pause) 24. 4 x 4 = (8 sec. pause) 16. 4 x 8 = (8 sec. pause) 32. 4 x 3 = (8 sec. pause) 12.

Now we are going to go even faster. If you haven't been answering quickly enough start the tape over and go through the drills again. BELL I hope you are ready for the next drill. Keep cool and answer quickly and correctly. Just listen (4 sec. pause) That is how much time you will now have to say each answer out loud. That's a lot of time when you think about it but you have to know your multiplication facts. Let's go --- 4 times 1 equals (4 sec. pause) 4. 4 x 7 = (4 sec. pause) 28. 4 x 4 = (4 sec. pause) 16. 4 x 9 = (4 sec. pause) 36. 4 x 6 = (4 sec. pause) 24. 4 x 3 = (4 sec. pause) 12. 4 x 8 = (4 sec. pause) 32. 4 x 2 = (4 sec. pause) 8. 4 x 5 = (4 sec. pause) 20. 4 x 10 = (4 sec. pause) 40. Can you go faster? 4 x 7 = (3 sec. pause) 28. [illegible] x 4 = (3 sec. pause) 16. 4 x 9 = (3 sec. pause) 36. 4 x 1 = (3 sec. pause) 4. 4 x 5 = (3 sec. pause) 20. 4 x 2 = (3 sec. pause) 8. 4 x 10 = (3 sec. pause) 40. 4 x 3 = (3 sec. pause) 12. 4 x 6 = [illegible] sec. pause) 24. 4 x 8 = (3 sec. pause) 32.

Wow! That was hard work!

The faster you can answer these multiplication facts the faster you will be able to solve problems using them. Come back again and use this tape whenever you want to practice the 4's multiplication table. Put this disc away and take your paper to your teacher. BELL

Math Script

Objective: D-Mult-4-17R

Purpose: To give child oral practice (drill) in the 5's multiplicatio table. Repeated addition is not used. Exercises are timed with decreasing time limits. The child should have had dis D-Mult-4-16R first.

Notes to Recorder: Emphasize underlined words. Note that pauses are timed from middle of script to end.

Title: Multiplication Drill of the 5's Table

Hi! On this tape you are going to practice the 5's multiplicati facts. Let's review the facts. Put your name, room and the date on the top of your workpage. BELL Write each problem on your workshee as I say it and write the answer. 5 times 1 equals -- trace over the 5 times 1 equals. BELL Answer? (pause) 5. 5 x 2 = BELL 5 x 2 5 x 3 = BELL 5 x 3 = 15. 5 x 4 = BELL 5 x 4 = 20. 5 x 5 = BELL 5 x 5 = 25. 5 x 6 = BELL 5 x 6 = 30. 5 x 7 = BELL 5 x 7 = 35. 5 x 8 = BELL 5 x 8 = 40. 5 x 9 = BELL 5 x 9 = 45. 5 x 10 = BELL 5 x 10 = 50.

Turn your workpage over (long pause). We are going to play a game. I will say a 5's multiplication fact and you will have time to say the answer out loud. Try to say the answer before I do. I will go slowly and you will have lots of time to answer the first couple of problems. Let's try some. 5 times 3 equals (10 sec. pause) 15. 5 x 10 = (10 sec. pause) 50. 5 x 7 = (10 sec. pause) 35. How are you doing? (pause) You now have 2 choices: you can either turn the workpage over and study the facts more or keep the tape on and say the answers a little faster because this game is speeding up. BELL Make sure your workpage is turned over. Ready? Set? Here we go! 5 times 5 equals (8 sec. pause) 25. 5 x [illegible] = (8 sec. pause) [illegible] [illegible] 5. 5 x 6 = (8 sec. pause) 30. 5 x [illegible]

(8 sec. pause) 20. 5 x 8 = (8 sec. pause) 40. 5 x 3 = (8 sec. pause) 15..

Now we are going to go even faster. If you haven't been answering all of the problems start the tape over and go through the drills again. BELL I hope you are ready for the next drill. Just listen -- (4 sec. pause) -- that is how much time you will have to say each answer out loud. It's a lot of time when you think about it but you have to know your multiplication facts. Don't lose your cool. Just answer quickly and correctly. Here we go -- 5 times 1 equals (4 sec. pause) 5. 5 x 7 = (4 sec. pause) 35. 5 x 4 = (4 sec. pause) 20. 5 x 9 = (4 sec. pause) 45. 5 x 6 = (4 sec. pause) 30. 5 x 3 = (4 sec. pause) 15. 5 x 8 = (4 sec. pause) 40. 5 x 2 = (4 sec. pause) 10. 5 x 5 = (4 sec. pause) 25. 5 x 10 = (4 sec. pause) 50. Can you go faster? 5 x 4 = (3 sec. pause) 20. 5 x 7 = (3 sec. pause) 35. 5 x 1 = (3 sec. pause) 5. 5 x 9 = (3 sec. pause) 45. 5 x 6 = (3 sec. pause) 30. 5 x 3 = (3 sec. pause) 15. 5 x 8 = (3 sec. pause) 40. 5 x 2 = (3 sec. pause) 10. 5 x 5 = (3 sec. pause) 25. 5 x 10 = (3 sec. pause) 50. Wow! That was some fast thinking!

The faster you can answer these multiplication facts the faster you can solve problems with the facts. Come back again and use this tape whenever you want to practice the 5's multiplication table. Put this disc away and take the workpage to your teacher. So long. BELL

These are the 5 skill sheets completed by Susan and corrected by the Aide.

Record (in role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets:

Susan can: Complete multiplication equations using factors 0-3.

Susan cannot: Use factors 4-5 to solve multiplication equations with consistent accuracy.

Describe how Susan worked with the prescription: Susan enjoyed using the discs; although she was working on difficult material, she completed the work independently.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Revise original prescription
X Extend the prescription
_____ Assign a CET for Skill # _____.

Why? Susan's performance on this prescription indicates need for extended work with factors of 3-5 in multiplication equations.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 4, in particular) and Susan's work on these materials, she was assigned the following on 3/11:

Page		
14 R	09	Disc on using factor of 4 in multiplication equations.
15 R		Disc on timed practice of 4's multiplication table.
17 R		Disc on timed practice of 5's multiplication table.
5		Additional practice using factors 1-5

Estimate of time needed: 1 class period

Recheck these 4 pages and the 3 disc scripts.

Record these pages and the date on the Prescription Sheet.

TO THE STUDENT

Can you do these problems? Write your answers in the blanks.

$4 \times 2 =$ ____

$3 \times 4 =$ ____

$$\begin{array}{r} 5 \\ \underline{\times 1} \\ \underline{\quad} \end{array}$$

$$\begin{array}{r} 3 \\ \underline{\times 9} \\ \underline{\quad} \end{array}$$

You will practice problems like these in this booklet.

Answers

8, 12

5, 27

Complete each equation.

$0 \times 0 = 0$

$0 \times 1 = 0$

$0 \times 2 = 0$

$1 \times 0 = 0$

$1 \times 1 = 1$

$1 \times 2 = 2$

$2 \times 0 = 0$

$2 \times 1 = 2$

$2 \times 2 = 4$

$3 \times 0 = 0$

$3 \times 1 = 3$

$3 \times 2 = 6$

$4 \times 0 = 0$

$4 \times 1 = 4$

$4 \times 2 = 8$

$5 \times 0 = 0$

$5 \times 1 = 5$

$5 \times 2 = 10$

Complete each equation.

$0 \times 3 = \underline{0}$
$0 \times 4 = \underline{0}$
$0 \times 5 = \underline{0}$

$1 \times 3 = \underline{3}$
$1 \times 4 = \underline{4}$
$1 \times 5 = \underline{5}$

$2 \times 3 = \underline{6}$
$2 \times 4 = \underline{8}$
$2 \times 5 = \underline{10}$

$3 \times 3 = \underline{9}$
$3 \times 4 = \underline{12}$
$3 \times 5 = \underline{15}$

$4 \times 3 = \underline{12}$
$4 \times 4 = \underline{\quad}$ X
$4 \times 5 = \underline{\quad}$ X

$5 \times 3 = \underline{\quad}$ X
$5 \times 4 = \underline{\quad}$ X
$5 \times 5 = \underline{\quad}$ X

Write the answers.

3 × 2 = 6

4 × 1 = 4

5 × 5 = X

5 × 3 = 15

2 × 5 = 10

3 × 4 = 12

2 × 4 = 8

1 × 1 = 1

4 × 2 = 8

5 × 4 = X

Name______________________ Date______ Room_____ 31 | 31

Get disc. D-Mult-4-12R

A. (1) 3 x 1 = 3   1 + 1 + 1 = 3

(2) 3 x 2 = 6   2 + 2 + 2 = 6

(3) 3 x 3 = 9   3 + 3 + 3 = 9

(4) 3 x 4 = 12   4 + 4 + 4 = 12

(5) 3 x 5 = 15   5 + 5 + 5 = 15

(6) 3 x 6 = 18   6 + 6 + 6 = 18

(7) 3 x 7 = 21   7 + 7 + 7 = 21

(8) 3 x 8 = 24   8 + 8 + 8 = 24

(9) 3 x 9 = 27   9 + 9 + 9 = 27

(10) 3 x 10 = 30   10 + 10 + 10 = 30

B.

4 x 3 12	9 x 3 27	5 x 3 15	0 x 3 0

3 x 8 = 24   3 x 6 = 18   3 x 3 = 9

7 x 3 21	1 x 3 3	10 x 3 30	2 x 3 6

.✓

Name__________________ Date_____ Room_____ 10 | 10

Get disc D-Mult-4-13R.

3 x 1 = 3

3 x 2 = 6

3 x 3 = 9

3 x 4 = 12

3 x 5 = 15

3 x 6 = 18

3 x 7 = 21

3 x 8 = 24

3 x 9 = 27

3 x 10 = 30

These are the 4 skill sheets completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets.

Susan can: Complete multiplication equations using factors of 4-5.

Susan cannot: Use factors to solve multiplication equations with consistent accuracy.

Describe how Susan worked with the prescription: Susan gained more independence working with the discs and completed her work without soliciting teacher help.

Based on your analysis of Susan's work, you decide to: (check one)

____ Revise original prescription
_X_ Extend prescription
____ Assign a CET

Why? Susan makes random errors on multiplication factors of 0-5. She needs some further practice with mixed factors.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 4, in particular) and Susan's work on these materials, she was assigned the following on 3/12:

Page	Reason
6	Multiplies with factors 0-5
7	with products to 50.

Estimate of time needed: 20 minutes maximum.

Recheck these two pages.

Record these two pages and the date on the Prescription Sheet.

Name____________________ Date_____ Room_____ 30 | 28

Get disc D-Mult-4-14R.

A.

(1) 1 + 1 + 1 + 1 = C___ 4 x 1 = C___

(2) 2 + 2 + 2 + 2 = _____ 4 x 2 = _____

(3) 3 + 3 + 3 + 3 = _____ 4 x 3 = _____

(4) 4 + 4 + 4 + 4 = _____ 4 x 4 = _____

(5) 5 + 5 + 5 + 5 = _____ 4 x 5 = _____

(6) 6 + 6 + 6 + 6 = _____ 4 x 6 = _____

(7) 7 + 7 + 7 + 7 = _____ 4 x 7 = _____

(8) 8 + 8 + 8 + 8 = _____ 4 x 8 = _____

(9) 9 + 9 + 9 + 9 = _____ 4 x 9 = _____

(10) 10 + 10 + 10 + 10 = _____ 4 x 10 = _____

B.

10
x 4
40

3
x 4
12

9
x 4 X

4
x 4
16

4 x 5 = 20

4 x 7 = 28

4 x 2 = 8

8
x 4 X

6
x 4
24

1
x 4
4

(7-67)

D-Mult-4 14R

Name______________ Date_____ Room_____ | 10 | 10 |

Get disc D-Mult-4-15R.

4 × 1 = ______

4 × 2 = 8

all
C

______ ______ = ______

______ ______ = ______

______ ______ = ______

______ ______ = ______

4 × 7 = ______

______ ______ = ______

______ ______ = ______

______ ______ = ______

(2-67)

Name________________ Date_____ Room_____ | 10 | 10 |

Get disc D-Mult-4-17R

5 x 1 = ______

5 x 2 = 10

_____ x _____ = ______

_____ x _____ = ______

_____ x _____ = ______

_____ x _____ = ______

_____ x _____ = ______

_____ x _____ = ______

_____ x _____ = ______

_____ x _____ = ______

Mult | 17R |

Write the answers.

$$\begin{array}{r} 1 \\ \times 1 \\ \hline 1 \end{array} \qquad \begin{array}{r} 2 \\ \times 3 \\ \hline 6 \end{array} \qquad \begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} \qquad \begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 4 \\ \times 4 \\ \hline 16 \end{array} \qquad \begin{array}{r} 5 \\ \times 5 \\ \hline 25 \end{array} \qquad \begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array} \qquad \begin{array}{r} 0 \\ \times 4 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} \qquad \begin{array}{r} 5 \\ \times 1 \\ \hline 5 \end{array} \qquad \begin{array}{r} 4 \\ \times 1 \\ \hline 4 \end{array} \qquad \begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \end{array} \qquad \begin{array}{r} 2 \\ \times 1 \\ \hline 2 \end{array} \qquad \begin{array}{r} 0 \\ \times 3 \\ \hline 0 \end{array} \qquad \begin{array}{r} 6 \\ \times 1 \\ \hline 6 \end{array}$$

These are the 2 skill sheets completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets:

Susan can: Complete multiplication equations using factors of 0-5.

Susan cannot: Demonstrate consistent accuracy in solving multiplication equations with mixed factors 0-5.

Describe how Susan worked with the prescription: She completed this work independently and quickly.

Based on your analysis of Susan's work, you decide to: (check one)

____ Revise original prescription
____ Extend prescription
__X__ Assign a CET for Skill __4__

Why? Susan's work on the materials for this skill indicates mastery of Skill 4.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 4, in particular) and Susan's work on these materials, she was assigned the following on 3/12:

Page	Reason
8	CET to test mastery of Skill 4

Estimate of time needed: 15 minutes maximum.

Recheck this CET page.

Record this page and date on the Prescription Sheet.

Write the answers.

6 × 2 12	5 × 5 25	4 × 5 20	6 × 5 30
9 × 3 27	7 × 2 14	0 × 10 0	8 × 5 40
8 × 5 40	9 × 2 18	7 × 5 X 30	7 × 4 X 34
8 × 3 24	6 × 3 18	7 × 1 7	6 × 0 0

Write the answers.

8 × 6 48	0 × 9 0	4 × 2 8	9 × 5 45
7 × 6 42	7 × 7 ✗	5 × 5 25	10 × 5 50
5 × 10 50	10 × 3 30	8 × 4 32	8 × 0 0
9 × 4 36	7 × 3 21	8 × 2 16	10 × 3 30
10 × 2 20	8 × 4 32	10 × 1 10	10 × 0 0

For extra practice do Page 10.

This is the Skill 4 CET completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the CET.

Susan can: Part I - Use factors 2-5 to solve mixed multiplication equations. Part II - Find missing factors in a multiplication equation when provided with visual clues (sets).

Susan cannot: ______________________________

Describe how Susan worked with the prescription: She worked with independence and confidence.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
__X__ Assign entire CET for Skill # 4 .
_____ Assign Part II of CET for Skill #____.
_____ Write initial prescription for Skill #____.

Why? Pretest score (Skill 5) was 0%; Part II of this CET was above mastery; past performance indicates Susan's mastery of this skill.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 5 in particular) and Susan's work on Part II of CET for Skill 4, she was assigned the following on 3/12 after a brief pupil-teacher conference to discuss the completed Skill 4 CET.

Page	Reason
7P	CET to test mastery of Skill 5.

Estimate of time needed: 20 minutes maximum.

Examine the objective for Skill 5 and recheck this CET (Skill 5 STS booklet).

Record the page and date on the Prescription Sheet.

CET I

CIRCLE CORRECT BOX	TL. PTS.	
	21	100%
	NO. OF PTS.	%
	20	95
	19	90
	18	86
	17	81
	16	76
	15	71
	14	67
	13	62
	12	57
	11	52
	10	48
	9	43
	8	38
	7	33
	6	29
	5	24
	4	19
	3	14
	2	10
	1	5

Multiply.

$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array}$ $\begin{array}{r} 2 \\ \times 5 \\ \hline 10 \end{array}$ $\begin{array}{r} 9 \\ \times 3 \\ \hline 27 \end{array}$ $\begin{array}{r} 7 \\ \times 2 \\ \hline 14 \end{array}$ $\begin{array}{r} 4 \\ \times 4 \\ \hline 16 \end{array}$

$\begin{array}{r} 8 \\ \times 2 \\ \hline 16 \end{array}$ $\begin{array}{r} 6 \\ \times 5 \\ \hline 30 \end{array}$ $\begin{array}{r} 9 \\ \times 4 \\ \hline 36 \end{array}$ $\begin{array}{r} 7 \\ \times 3 \\ \hline 21 \end{array}$ $\begin{array}{r} 5 \\ \times 3 \\ \hline 15 \end{array}$

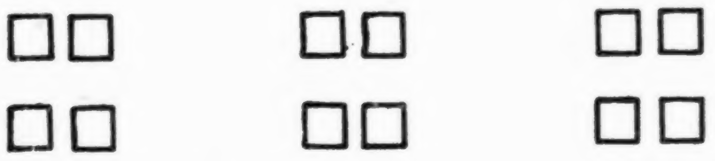
$\begin{array}{r} 8 \\ \times 5 \\ \hline 40 \end{array}$ $\begin{array}{r} 7 \\ \times 4 \\ \hline 28 \end{array}$ $\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array}$ $\begin{array}{r} 2 \\ \times 4 \\ \hline 8 \end{array}$ $\begin{array}{r} 6 \\ \times 3 \\ \hline 18 \end{array}$

4 × 8 = 32 5 × 7 = 35

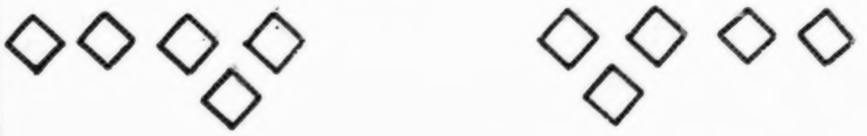
3 × 5 = 15 4 × 5 = 20

2 × 6 = 12 3 × 3 = 9

Fill in the blank to make a true number sentence.



3 × 4 = 12



2 × 5 = 10

CIRCLE CORRECT BOX	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

This is the Skill 5 CET completed by Susan and recorded by the Aide.

Record (in the role of the Aide) the scores on the prescription sheet.

Look at Susan's work on the CET.

Susan can: Write multiplication factors to complete equations when pictured sets are provided.

Susan cannot: Complete equations with factors of 3 & 5.

Describe how Susan worked with the prescription: Susan worked with ease and independence.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
_____ Assign entire CET for skill #_____.
_____ Assign Part II of CET for skill #_____.
__X__ Write initial prescription for skill #__6__.

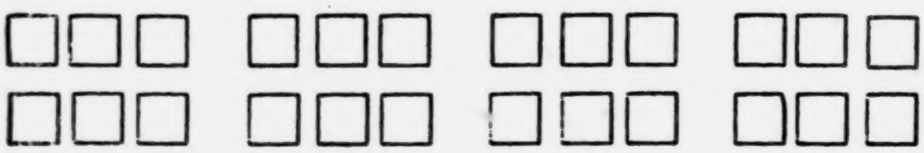
Why? Pretest score (Skill 6) was 40%; Part II of this CET indicates work needed.

CET I

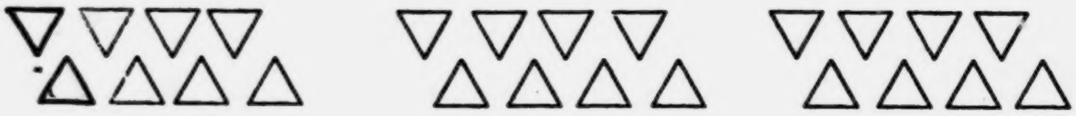
Fill in each blank to make an equation.

CIRCLE CORRECT BOX

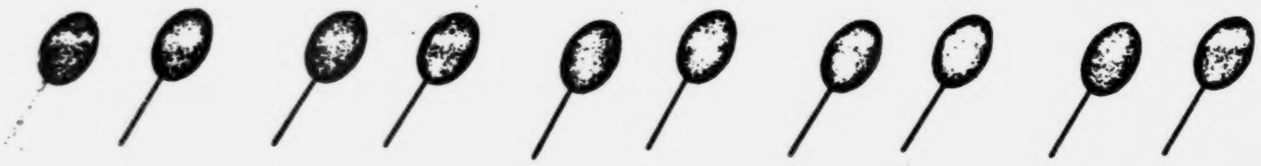
TL. PTS.	
[✓ 4]	[✓ 100%]
NO. OF PTS.	%
3	75
2	50
1	25



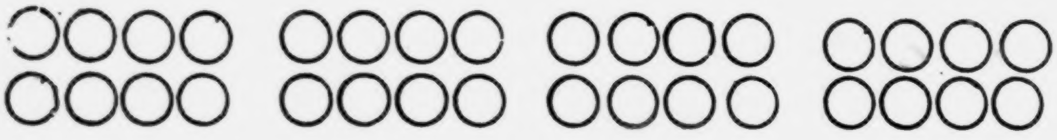
4 × 6 = 24



3 × 8 = 24



5 × 2 = 10



4 × 8 = 32

Multiply.

2 × 6 = 12 5 × 3 = 18 X 4 × 7 = 28

6 × 2 = 12 3 × 5 = 18 X 7 × 4 = 28

CIRCLE CORRECT BOX

TL. PTS.	
6	100%
NO. OF PTS.	%
5	83
[✓ 4]	[✓ 67]
3	50
2	33
1	17

This is a copy of the STS booklet for Skill 6. Examine all the skill sheets and STS sheets (pp. 14 & 15) in the booklet to become familiar with the materials for this skill.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 6 in particular) and Susan's work on Part II of this CET, she was assigned the following on 3/13:

Page	Reason
Student Page	Introduces skill; previews work
2	Shows multiplication facts by circling sets and supplying product.
4	Writes missing fact to complete equations.
6	Writes commutative equations.
8	Supplies products to commutative equations.

Estimate of time needed: two class periods.

Recheck these five pages.

Record these pages and the date on the Prescription Sheet.

SCHOOL CODE **NAME** ______________________________

NUMBER ____________________ **CLASS** ____________________

ipi

individually prescribed instruction

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL D

MULTIPLICATION (05)

SKILL 6

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; Joseph I. Lipson, Ph.D., Director: Edith Kohut; Barbara Thomas.

Written by the staff of Appleton-Century-Crofts under the direction of Jerome D. Kaplan, Ed.D., Teachers College, Columbia University

entury-Crofts Division of Meredith Publishing Company

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LOPMENTAL EDITION

TO THE STUDENT

Circle yes or no.

$6 \times 4 = 24$

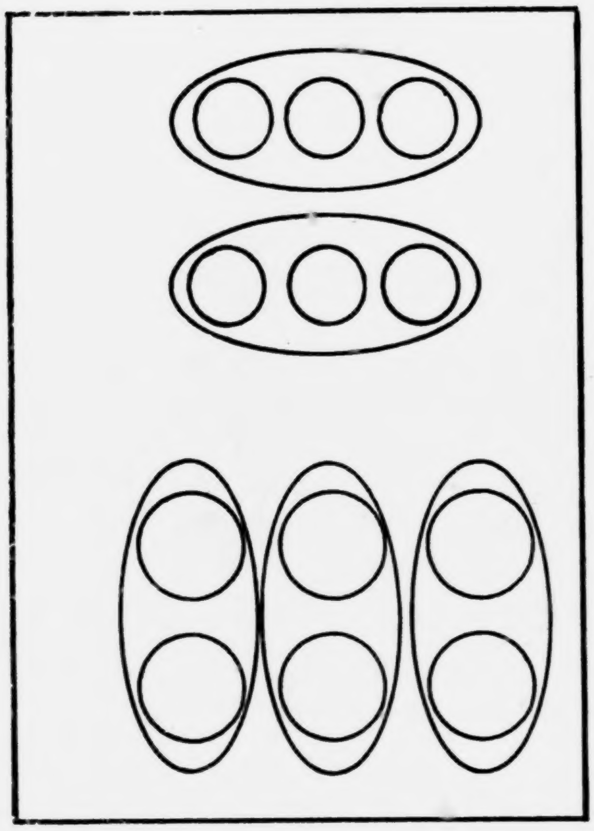
Does $4 \times 6 = 24$? yes / no

In this booklet you will learn how to answer this question.

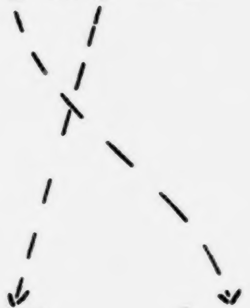
Answer

yes

Write in the missing numerals.



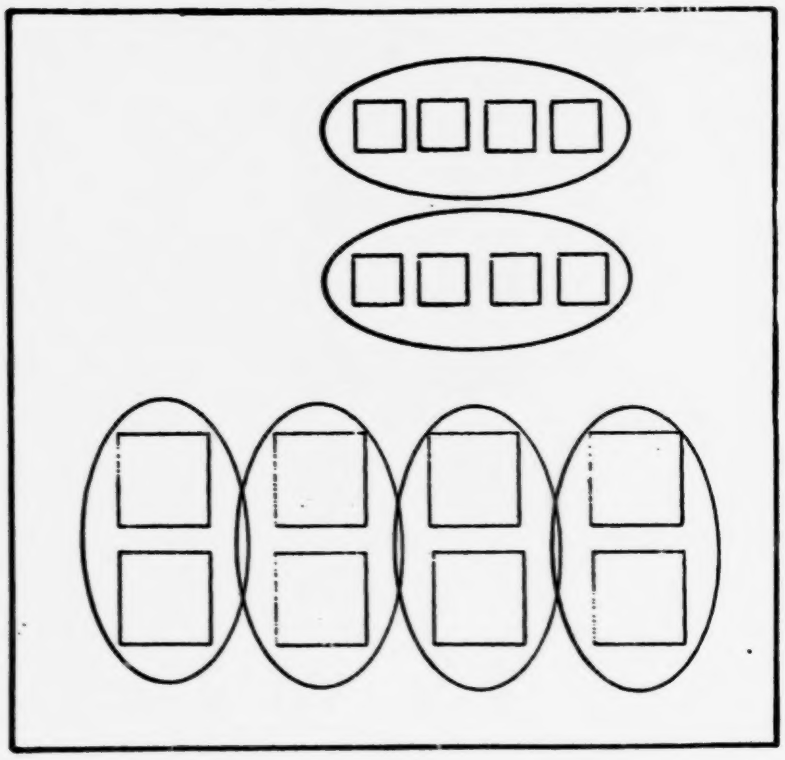
2 × 3 = 6



3 × 2 = 6

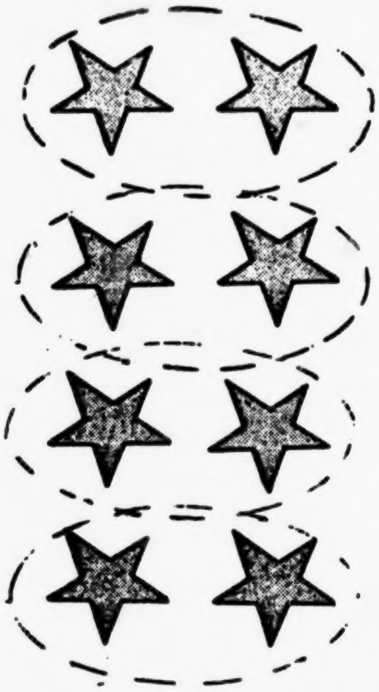
Fill in the missing numerals.

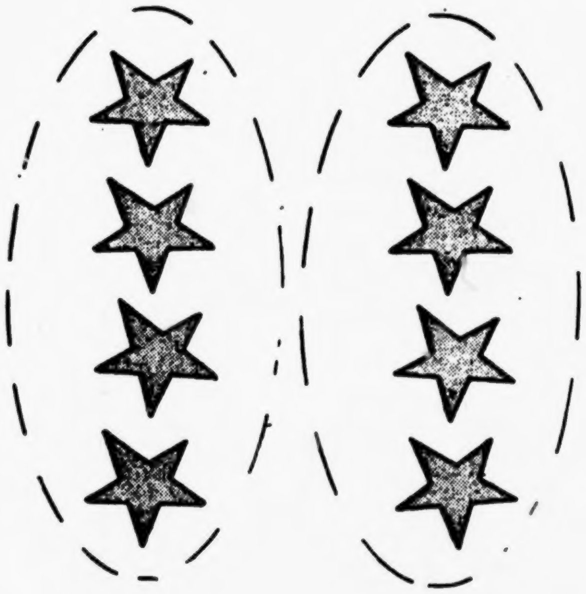
2 × 4 = 8



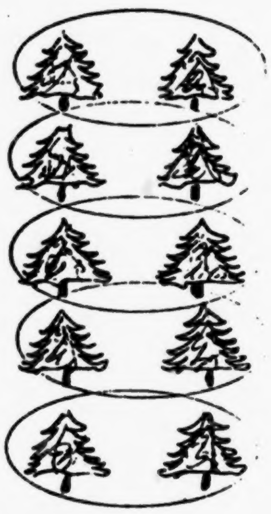
4 × 2 = 8

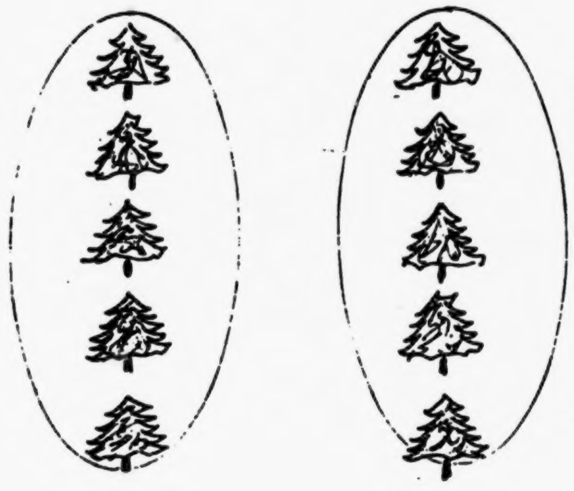
Find the answers. Draw a circle around each part of a set.





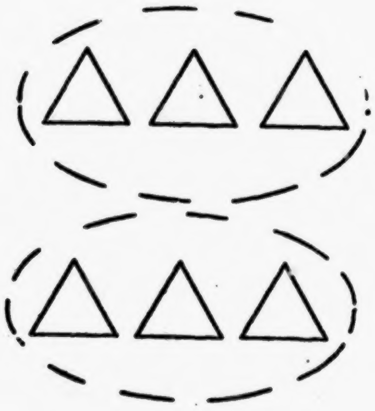
4 × 2 = 8 ⟷ 2 × 4 = 8

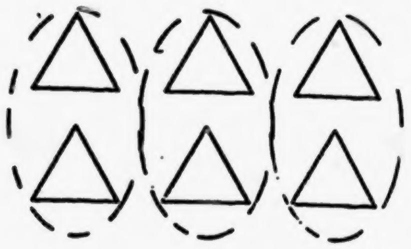




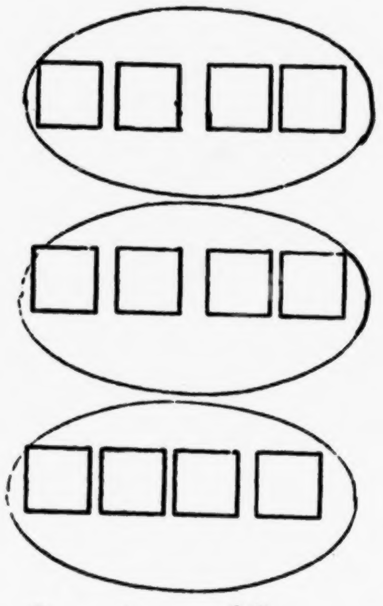
5 × 2 = 10 ⟷ 2 × 5 = 10

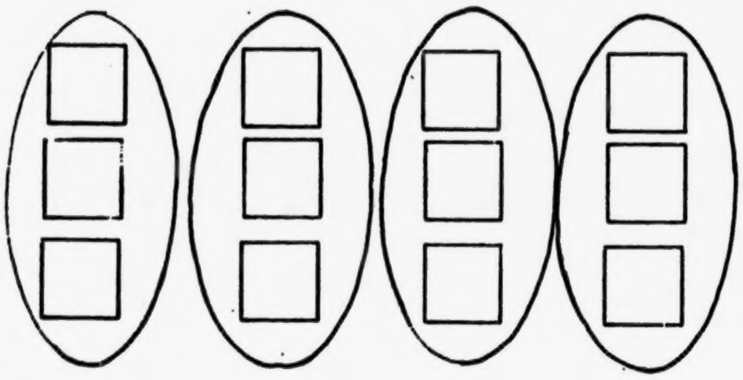
Find the answers. Draw a circle around each part of a set.





2 × 3 = 6 ↔ 3 × 2 = 6





3 × 4 = 12 ↔ 4 × 3 = 12

Write in the missing numerals.

4 × 3 = 3 × 4

5 × 4 = 4 × 5

5 × 1 = 1 × 5

6 × 2 = 2 × 6

7 × 4 = 4 × 7

6 × 3 = 3 × 6

3 × 5 = 5 × 3

9 × 1 = 1 × 9

9 × 3 = 3 × 9

4 × 7 = 7 × 4

0 × 3 = 3 × 0

8 × 2 = 2 × 8

8 × 2 = 2 × 8

6 × 0 = 0 × 6

3 × 5 = 5 × 3

Write the answers in the blanks.

$2 \times 3 =$ 6

$3 \times 2 =$ 6

Does $2 \times 3 = 3 \times 2$? yes

Does $3 \times 2 = 2 \times 3$? yes

Remember, the order of the numbers does not affect the answers.

Write in the missing numerals.

$2 \times 1 =$ 1 $\times$ 2 $= 2$

$3 \times 1 =$ 1 $\times$ 3 $= 3$

$2 \times 4 =$ 4 $\times$ 2 $=$ 8

$3 \times 2 =$ 2 $\times$ 3 $= 6$

The COMMUTATIVE PRINCIPLE says that the order of the numbers does not affect the answer.

Write in the missing numerals to show the commutative principle.

2 × 5 = 5 × 2 = 10

3 × 4 = 4 × 3 = 12

6 × 2 = 2 × 6 = 12

3 × 5 = 5 × 3 = 15

2 × 7 = 7 × 2 = 14

3 × 6 = 6 × 3 = 18

2 × 9 = 9 × 2 = 18

3 × 7 = 7 × 3 = 21

For more practice, do Page 10.

Write in the missing numerals.

3 × 1 = 3

1 × 3 = 3

0 × 4 = 0

4 × 0 = 0

4 × 3 = 12

3 × 4 = 12

6 × 2 = 12

2 × 6 = 12

2 × 5 = 10

5 × 2 = 10

3 × 6 = 18

6 × 3 = 18

5 × 9 = 45

9 × 5 = 45

For more practice, do page 11.

Write in the missing numerals.

6 × 0 = 0

0 × 6 = 0

8 × 4 = 32

4 × 8 = 32

4 × 7 = 28

7 × 4 = 28

8 × 3 = 24

3 × 8 = 24

9 × 4 = 36

4 × 9 = 36

4 × 5 = 20

5 × 4 = 20

5 × 10 = 50

10 × 5 = 50

5 × 0 = 0

0 × 5 = 0

4 × 6 = 24

6 × 4 = 24

For more practice, do Page 12.

CET I

Multiply.

2 × 7 = ____ 4 × 10 = ____

7 × 2 = ____ 10 × 4 = ____

3 × 6 = ____ 2 × 8 = ____

6 × 3 = ____ 8 × 2 = ____

3 × 9 = ____ 4 × 3 = ____

9 × 3 = ____ 3 × 4 = ____

$$\begin{array}{rrrrrr} 5 & 7 & 4 & 9 & 5 & 4 \\ \times 7 & \times 5 & \times 9 & \times 4 & \times 4 & \times 5 \\ \hline \_\_\_ & \_\_\_ & \_\_\_ & \_\_\_ & \_\_\_ & \_\_\_ \end{array}$$

CIRCLE CORRECT BOX

TL. PTS.	
18	100%
NO. OF PTS.	%
17	94
16	89
15	83
14	78
13	72
12	67
11	61
10	56
9	50
8	44
7	39
6	33
5	28
4	22
3	17
2	11
1	6

Label the factors and the product on the lines below each problem.

4 × 3 = 12

______ ______ ______

6 × 5 = 30

______ ______ ______

CIRCLE CORRECT BOX

TL. PTS.	
6	100%
NO. OF PTS.	%
5	83
4	67
3	50
2	33
1	17

Write the answers in the blanks, using the commutative principle.

4 × 5 = 5 × 4

0 × 5 = 5 × 0

2 × 6 = 6 × 2

3 × 7 = 7 × 3

4 × 2 = 2 × 4 = 8

3 × 5 = 5 × 3 = 15

6 × 1 = 1 × 6

4 × 3 = 3 × 4

Write in the missing numerals.

4 × 2 = 8
6 × 2 = 12
3 × 4 = 12

2 × 4 = 8
2 × 6 = 12
4 × 3 = 12

5 × 4 = 20
0 × 3 = 0
1 × 3 = 3

4 × 5 = 20
3 × 0 = 0
3 × 1 = 3

2 × 5 = 10
3 × 6 = 18
2 × 9 = 18

5 × 2 = 10
6 × 3 = 18
9 × 2 = 18

Write in the missing numerals.

9 × 3 = 27
3 × 9 = 27

8 × 3 = 24
3 × 8 = 24

3 × 7 = 21
7 × 3 = 21

5 × 3 = 15
3 × 5 = 15

4 × 3 = 12
3 × 4 = 12

6 × 4 = 24
4 × 6 = 24

9 × 4 = 36
4 × 9 = 36

9 × 5 = 45
5 × 9 = 45

8 × 5 = 40
5 × 8 = 40

7 × 2 = 14
2 × 7 = 14

6 × 5 = 30
5 × 6 = 30

8 × 2 = 16
2 × 8 = 16

CET II

Multiply.

4 × 5 = ____

5 × 4 = ____

2 × 6 = ____

6 × 2 = ____

2 × 4 = ____

4 × 2 = ____

6 × 1 = ____

1 × 6 = ____

4 × 7 = ____

7 × 4 = ____

0 × 5 = ____

5 × 0 = ____

3 × 7 = ____

7 × 3 = ____

3 × 5 = ____

5 × 3 = ____

5 × 9 = ____

9 × 5 = ____

CIRCLE CORRECT BOX

TL. PTS.	
18	100%
NO. OF PTS.	%
17	94
16	89
15	83
14	78
13	72
12	67
11	61
10	56
9	50
8	44
7	39
6	33
5	28
4	22
3	17
2	11
1	6

Label the factors and the product on the lines below each problem.

5 × 5 = 25

______ ______ ______

2 × 6 = 12

______ ______ ______

CIRCLE CORRECT BOX

TL. PTS.	
6	100%
NO. OF PTS.	%
5	83
4	67
3	50
2	33
1	17

Page 14

LEVEL D, MULTIPLICATION, SKILL 6

OBJECTIVE: Completes two multiplication statements which together illustrate the commutative principle for multiplication.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Completes multiplication facts. Illustrated with circled sets.	
2.	Circles parts of sets to show multiplication facts. Supplies product.	
3.	Circles parts of sets to show multiplication facts. Supplies products.	
4.	Completes equations.	
5.	Completes equations.	
6.	Completes equations.	10
7.	Fills in blanks in pairs of equations.	11
8.	Fills in blanks in pairs of equations.	12
9.	CET I.	
	CET II.	13

Circle pages that are to be done.

Standard Teaching Sequence, Con't.

1967 - 68

Sequence No.	Prescription No.	
14R		Studies pictures illustrating the Commutative Law for multiplication.
15R		Draws pictures and completes multiplication statements illustrating the Commutative Law.

Teaching Aids:

Assorted Flashcards
Multo Game
Dominoes
Imma Whiz Game

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 Elementary Mathematics - 3	188	220

Math Script

Objective: D-Mult-6-14R

Purpose: Teaches the Commutative Law with pictured and oral examples. May be used as remedial work.

Notes to Recorder: Enunciate "Com-mu-ta-tive" slowly in beginning of script.

Title: The Commutative Law

Hi! Do you have your thinking cap on? I hope so. Today you are going to study the Commutative Law. Have you ever heard of the Commutative Law before? (pause) Commutative Law - say it with me — Commutative Law. Now say it by yourself. (long, long pause) Commutative Law.

Put your name, room and date at the top of the 1st workpage. BELL Look at the ducks on the top of the page. BELL Picture A is 1 group of 4 ducks. It shows the multiplication fact 1 x 4. (pause) In picture B there are 4 groups of 1 duck each. This shows the multiplication fact 4 x 1. How many ducks are there in picture A? (pause) 4 ducks. How many ducks are there in picture B? (pause) 4 ducks too. Both sets have the same number of ducks so 1 x 4 equals 4 x 1. Put your finger on the equals sign. (pause) 1 times 4 equals 4 times 1. This is an example of the Commutative Law. When 4 and 1 are multiplied, the answer is always 4. It doesn't matter in what order the numbers are written.

Part C is a picture of 2 times 3. (pause) Part D is a picture of 3 times 2 (pause) The numbers 3 and 2 are used in both problems. Count the balloons and see if 2 groups of 3 balloons is the same as 3 groups of 2 balloons. BELL They are the same so 2 x 3 = 3 x 2. Draw an equals sign between the 2 problems. BELL This is another example of the Commutative Law because we can change the 2 numbers in a problem around and still get the same answer. 2 x 3 = 6; 3 x 2 = 6 so 2 x 3 = 3 x 2.

Turn to the next workpage, and fill in the heading. BELL At the top of the page are 3 examples of the Commutative Law. Look at each example. (pause) Do you see that the numbers on 1 side of the equals sign are the same as the numbers on the other side of the equals sign only they are changed around? (pause) Say the problems with me. 1 times 4 equals 4 x 1 (pause) 2 times 3 = 3 times 2. (pause) 4 x 3 = 3 x 4.

Let's draw a picture to prove 4 times 3 equals 3 times 4 on your paper. In the space by E draw 4 groups of 3 triangles. BELL Draw a circle around each of the 4 groups. BELL Next we will use the same 2 numbers, 4 and 3, but we will change them around just as the Commutative Law says we can to show 3 times 4. In space F draw 3 groups of 4 triangles. BELL Draw a circle around each of the 3 groups. BELL How many triangles did you draw in space E? BELL You should have drawn 12. How many triangles did you draw in picture F? BELL There should be 12 triangles in Part F too. From your picture you can see that 4 x 3 = 3 x 4. Draw an equals sign between the problems. BELL

So, using the Commutative Law we could say 7 times 3 equals 3 times 7 or we could say 2 billion times 9 equals 9 times 2 billion. Pretty neat, isn't it?

Look at the problems at the bottom of your workpage. You must make each number sentence true. Let's do number 1 together. 5 x 2 = 2 x what number? The Commutative Law says that you can make this number sentence true by putting what number in the box? (pause) 5! Write a 5 in the box. BELL 5 x 2 = 2 x 5. If you are not sure, draw a picture of 5 groups of 2 circles. Then draw a picture of 2 groups of 5 circles and see if there are 10 circles in both pictures - there should be. BELL Use the Commutative Law and make the rest of the number sentences true. BELL

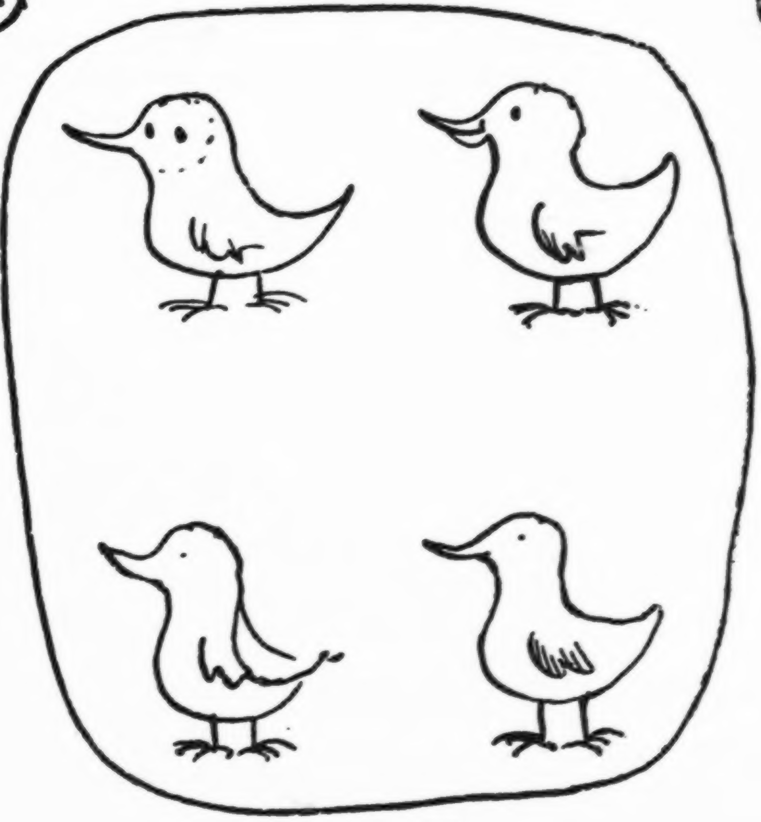
The Commutative Law is a lot easier to use than it is to say. Say it again with me: Com-mu-ta-tive Law. Good bye for now. Take your workpages to an Aide and put this disc away. BELL

Name___________________ Date_____ Room_____

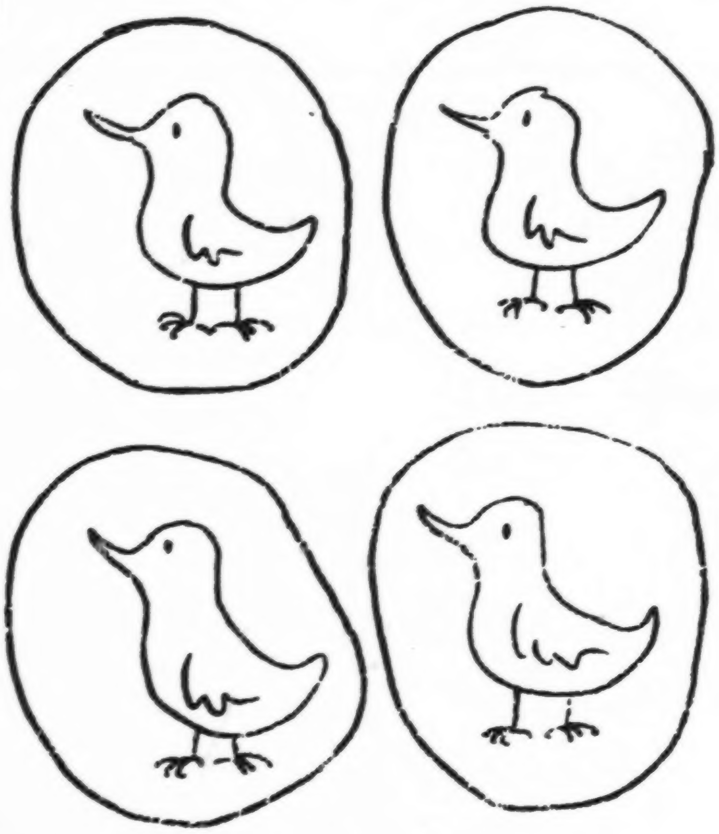
—	

Get disc D-Mult-6-14R.

Ⓐ

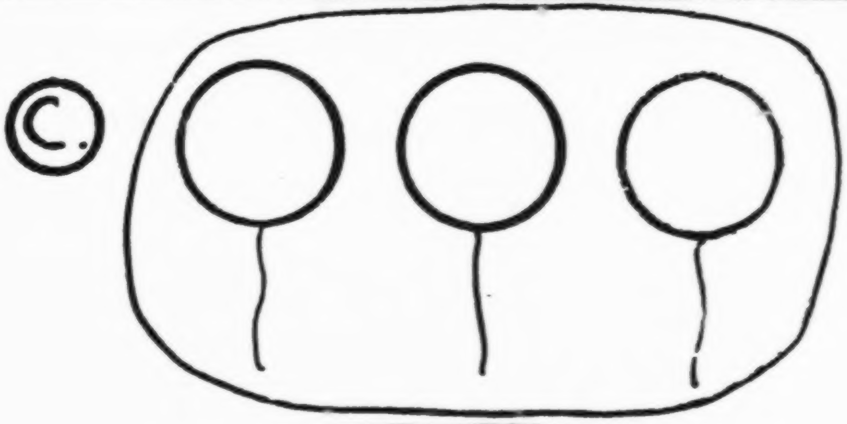


Ⓑ

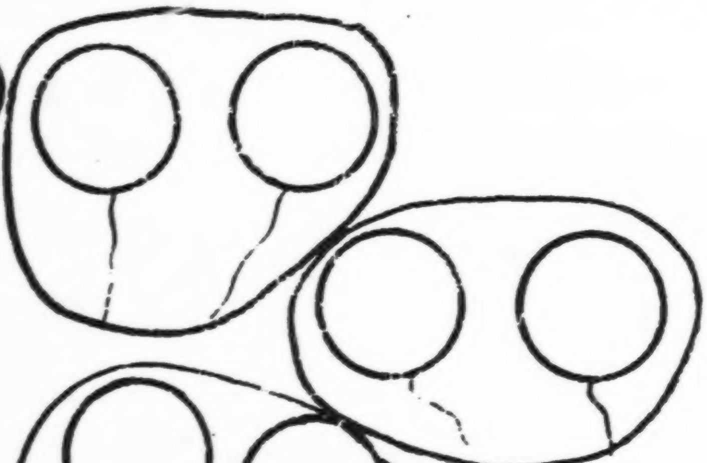


1 × 4 ═══ 4 × 1

Ⓒ



Ⓓ



2 × 3 ====== 3 × 2

Name________________ Date_____ Room____ 6

Commutative Law

1 x 4 = 4 x 1   4 x 3 = 3 x 4

2 x 3 = 3 x 2

E.   F.

4 x 3   =   3 x 4

---

1) 5 x 2 = 2 x ☐

2) 0 x 8 = 8 x ☐

3) 503 x 21 = $\boxed{21}$ x 503

4) 39 x 61 = 61 x ☐

5) 6 x 7 = ☐ x 6

6) 94 x 18 = ☐ x 94

These are the five skill sheets completed by Susan and corrected by the Aide.

Record (in the role of the Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets.

Susan can: Circle sets to show multiplication facts and supply factors to complete a multiplication equation.

Susan cannot: ______________________________

Describe how Susan worked with the prescription: She completed her work with greater independence and more confidence than she has ever demonstrated.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Revise original prescription.
__X__ Extend prescription.
_____ Assign a CET.

Why? Susan needs a periodic review of the multiplication facts to enable her to work with consistent accuracy. (This is a follow-up on a previous diagnostic decision.)

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 6 in particular), she was assigned the following on 3/13 :

Page	Reason
12	Mixed practice of multiplication fact equations.
Flashcards 02 (John)	Susan and John need this work; Susan will benefit from this peer tutoring setting.

Estimate of time needed: 30 minutes maximum.

Recheck this page.

Record this page and date on the Prescription Sheet.

TO THE STUDENT

Circle yes or no.

$6 \times 4 = 24$

Does $4 \times 6 = 24$? yes

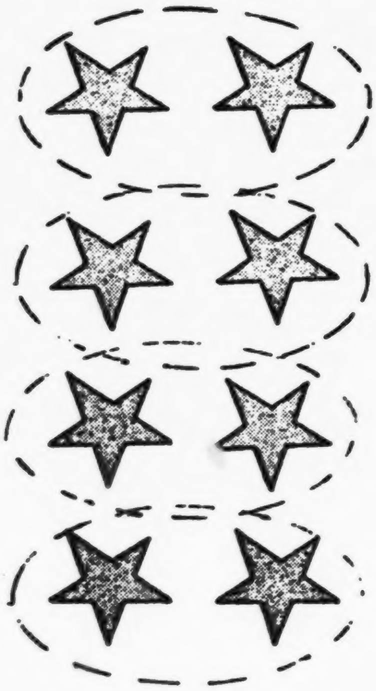
no

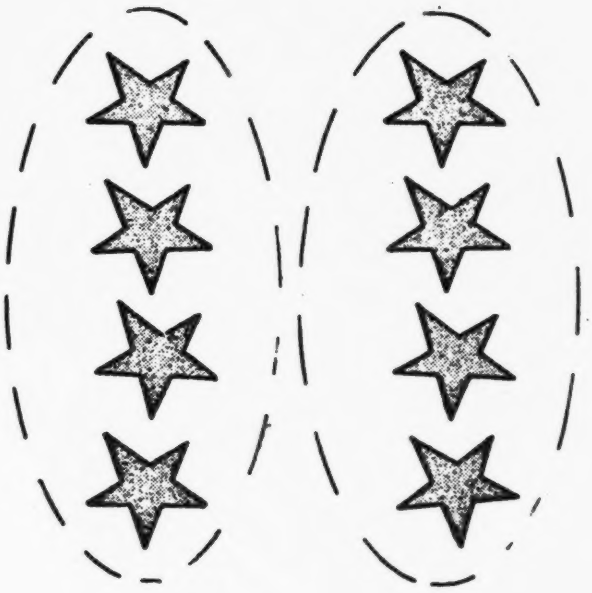
In this booklet you will learn how to answer this question.

Answer

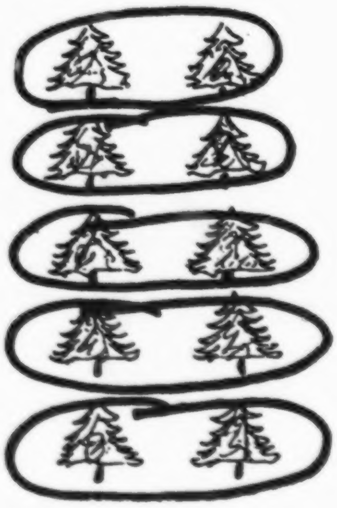
yes

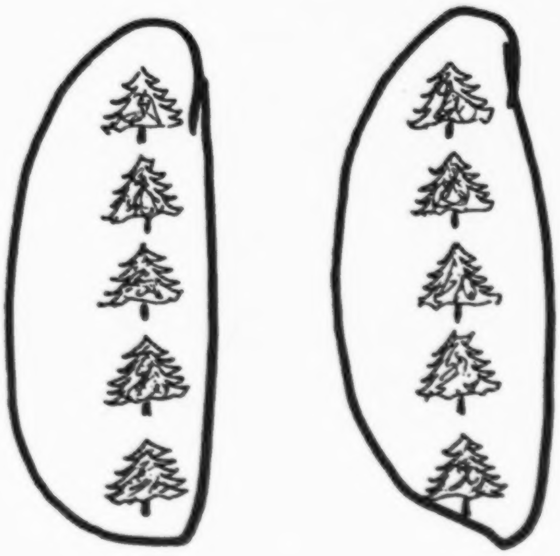
Find the answers. Draw a circle around each part of a set.





4 × 2 = 8 ⟷ 2 × 4 = 8





5 × 2 = 10 ⟷ 2 × 5 = 10

Write in the missing numerals.

4 × 3 = 3 × 4

5 × 4 = 4 × 5

5 × 1 = 1 × 5

6 × 2 = 2 × 6

7 × 4 = 4 × 7

6 × 3 = 3 × 6

3 × 5 = 5 × 3

9 × 1 = 1 × 9

9 × 3 = 3 × 9

4 × 7 = 7 × 4

0 × 3 = 3 × 0

8 × 2 = 2 × 8

8 × 2 = 2 × 8

6 × 0 = 0 × 6

3 × 5 = 5 × 3

all
C

The COMMUTATIVE PRINCIPLE says that the order of the numbers does not affect the answer.

Write in the missing numerals to show the commutative principle.

2 × 5 = 5 × 2 = 10

3 × 4 = 4 × 3 = 12

6 × 2 = 2 × 6 = 12

3 × 5 = 5 × 3 = 15

2 × 7 = 6 × 2 = 14 X

3 × 6 = 6 × 3 = 18

2 × 9 = 9 × 2 = 18

3 × 7 = 7 × 4 = 21 X

For more practice, do Page 10.

Write in the missing numerals.

6 × 0 = 0

0 × 6 = 0

4 × 7 = 28

7 × 4 = 28

9 × 4 = 36

4 × 9 = 36

5 × 10 = 50

10 × 5 = 50

4 × 6 = 24

6 × 4 = 24

8 × 4 = 32

4 × 8 = 32

8 × 3 = 24

3 × 8 = 24

4 × 5 = 20

5 × 4 = 20

X 5 × 1 = 0

X 1 × 5 = 0

For more practice, do Page 12.

This is the skill sheet completed by Susan and corrected by the Aide.

Record (in the role of the Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheet.

Susan can: Supply products and factors in mixed multiplication equations.

Susan cannot: ____________________

Describe how Susan worked with the prescription: Susan worked well in the peer tutor setting; this added to her motivation for further multiplication review and she requested that she be used to tutor other students in the future.

Based on your analysis of Susan's work, you decide to: (check one)

____ Revise original prescription
____ Extend prescription
X Assign a CET for Skill 6

Why? Susan's performance on the materials indicates skill mastery.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 6 in particular), she was assigned the following on 3/14:

Page	Reason
13	CET to test mastery of Skill 6

Estimate of time needed: 20 minutes maximum.

Recheck this CET page.

Record this page and date on the Prescription Sheet.

Write in the missing numerals.

9 × 3 = 27
8 × 3 = 24
3 × 7 = 21

3 × 9 = 27
3 × 8 = 24
7 × 3 = 21

5 × 3 = 15
4 × 3 = 12
6 × 4 = 24

3 × 5 = 15
3 × 4 = 12
4 × 6 = 24

9 × 4 = 36
9 × 5 = 45
8 × 5 = 40

4 × 9 = 36
5 × 9 = 45
5 × 8 = 40

7 × 2 = 14
6 × 5 = 30
8 × 2 = 16

2 × 7 = 14
5 × 6 = 30
2 × 8 = 16

This is the Skill 6 CET completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the CET.

Susan can: Part I - Supply products of mixed multiplication equations with factors 1-9. Part II -

Susan cannot: Label factors and products in multiplication equations.

Describe how Susan worked with the prescription: She viewed this CET in a diagnostic way and accepted her lack of mastery in Part II.

Based on your analysis of Susan's work, you decide to:

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
_____ Assign entire CET for Skill ____.
_____ Assign Part II of CET for Skill ____.
__X__ Write initial prescription for Skill _7_.

Why? Susan needs to become familiar with the labels of factor and product in multiplication equations.

CET II

Multiply.

4 × 5 = 20

5 × 4 = 20

2 × 6 = 12

6 × 2 = 12

2 × 4 = 8

4 × 2 = 8

6 × 1 = 6

1 × 6 = 6

4 × 7 = 28

7 × 4 = 28

0 × 5 = 0

5 × 0 = 0

3 × 7 = 21

7 × 3 = 21

3 × 5 = 15

5 × 3 = 15

5 × 9 = 45

9 × 5 = 45

CIRCLE CORRECT BOX

TL. PTS.	
[✓ 18]	[✓ 100%]
NO. OF PTS.	%
17	94
16	89
15	83
14	78
13	72
12	67
11	61
10	56
9	50
8	44
7	39
6	33
5	28
4	22
3	17
2	11
1	6

Label the factors and the product on the lines below each problem.

5 × 5 = 25

X____ X____ X____

2 × 6 = 12

X____ X____ X____

CIRCLE CORRECT BOX

TL. PTS.	
6	100%
NO. OF PTS.	%
5	83
4	67
3	50
2	33
1	17
[✓ 0]	[✓ 0]

This is a copy of the STS booklet for Skill 7. Examine all the skill sheets and STS sheets (pp. 9 & 10) in the booklet to become familiar with the materials for this skill.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 7 in particular) and Susan's work on Part II of this CET, she was assigned the following on 3/14 :

Page	Reason
Student Page	Introduces skill, previews work
1	Identifying product and factor clues
2	Identifying product and factor clues
3	Identifying product and no clues

Estimate of time needed: one class period

Recheck these four pages.

Record these pages and the date on your Prescription Sheet.

SCHOOL CODE

☐

NAME ____________________

NUMBER ____________________ **CLASS** ____________________

ipi

individually prescribed instruction

MATHEMATICS

Standard Teaching Sequence Booklet

TEACHER'S EDITION

LEVEL D

MULTIPLICATION (05)

SKILL 7

Based upon materials developed by The Mathematics Curriculum Staff, Learning Research and Development Center, University of Pittsburgh; **Joseph I. Lipson, Ph.D., Director; Edith Kohut; Barbara Thomas.**

Written by the staff of Appleton-Century-Crofts under the direction of **Jerome D. Kaplan, Ed.D.**, Teachers College, Columbia University

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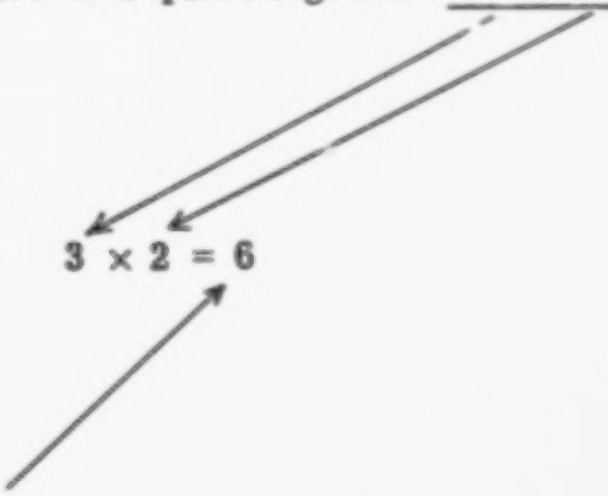
DEVELOPMENTAL EDITION

322

TO THE STUDENT

What are the numbers called that are multiplied together? ______________



$$3 \times 2 = 6$$

What is the answer called? ________________

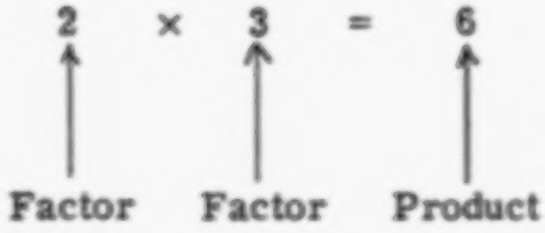
This booklet will teach you to use the words product and factor.

Answers

factors, product

The numbers that are multiplied together are called factors.

The answer to a multiplication question is called the product.



In this problem the factors are 2 and 3 and the product is 6.

Circle the factors.

⑤ × ② = 10　　③ × ① = 3

③ × ④ = 12　　④ × ⑤ = 20

Circle the product.

4 × 1 = ④　　3 × 3 = ⑨

3 × 5 = ⑮　　2 × 2 = ④

For extra practice do Page 6.

The numbers we multiply together are called factors.

$$2 \times 8 = 16$$

The answer is called the product.

Circle the factors.

$$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array}$$

$0 \times 8 = 0$

$1 \times 1 = 1$

$4 \times 3 = 12$

$3 \times 2 = 6$

$$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$$

$3 \times 1 = 3$

Circle the products.

$2 \times 9 = 18$

$3 \times 6 = 18$

$5 \times 1 = 5$

$$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$$

$4 \times 4 = 16$

Write the word product or factor in the blanks.

$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} \leftarrow$ product

$6 \times \underset{\substack{\uparrow \\ \text{factor}}}{2} = 12$

$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array} \leftarrow$ product

$\begin{array}{r} 3 \\ \times 4 \\ \hline 12 \end{array} \leftarrow$ product

$\begin{array}{r} 2 \\ \times 0 \\ \hline 0 \end{array} \leftarrow$ product

$\underset{\substack{\uparrow \\ \text{factor}}}{3} \times 6 = 18$

$6 \times 1 = \underset{\substack{\uparrow \\ \text{product}}}{6}$

$4 \times 5 = \underset{\substack{\uparrow \\ \text{product}}}{20}$

$\begin{array}{r} 5 \\ \times 3 \\ \hline 15 \end{array}$ ← factor (at $\times 3$)

For extra practice, do Page 7.

Write the word product or factor in the blanks.

$$\begin{array}{rl} 8 & \\ \underline{\times 1} & \\ 8 & \leftarrow \underline{\text{product}} \end{array}$$

$$2 \times \underset{\underset{\underline{\text{factor}}}{\uparrow}}{1} = 2$$

$$\begin{array}{rl} 3 & \\ \underline{\times 1} & \leftarrow \underline{\text{factor}} \\ 3 & \end{array}$$

$$\underset{\underset{\underline{\text{factor}}}{\uparrow}}{4} \times 2 = 8$$

$$\begin{array}{rl} 5 & \\ \underline{\times 0} & \leftarrow \underline{\text{factor}} \\ 0 & \end{array}$$

$$3 \times \underset{\underset{\underline{\text{factor}}}{\uparrow}}{3} = 9$$

$$0 \times 8 = \underset{\underset{\text{product}}{\uparrow}}{0}$$

$$\begin{array}{rl} 9 & \\ \underline{\times 1} & \leftarrow \underline{\text{factor}} \\ 9 & \end{array}$$

CET I

Circle each factor and draw a box around each product.

4 × 7 = 28

2 × 9 = 18

CIRCLE CORRECT BOX	TL. PTS.	
	12	100%
	NO. OF PTS.	%
	11	92
	10	83
	9	75
	8	67
	7	58
	6	50
	5	42
	4	33
	3	25
	2	17
	1	8

Write the word product or factor for each numeral.

6 ← _____ 4 ← _____

×3 ← _____ ×4 ← _____

18 ← _____ 16 ← _____

Mary bought 3 bags of marbles. Each bag had 10 marbles in it. How many marbles does Mary have?____ marbles

John works in a grocery store 3 days a week. How many days does he work in 3 weeks?____ days

CIRCLE CORRECT BOX	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

Fill in the blanks.

$$2 \times 5 = 10$$

factor factor product

In this problem the factors are 2 and 5, and the product is 10.

$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array}$$

In this problem the factors are 4 and 2 and the product is 8.

$$2 \times 0 = 0$$

The factors are 2 and 0, the product is 0.

$$3 \times 4 = 12$$

The factors are 3 and 4, and the product is 12

Write product or factor in each blank.

$$\underset{\text{factor}}{\underset{\uparrow}{3}} \times \underset{\text{factor}}{\underset{\uparrow}{2}} = \underset{\text{product}}{\underset{\uparrow}{6}}$$

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} \leftarrow \text{product}$$

$$4 \times \underset{\text{factor}}{\underset{\uparrow}{3}} = 12$$

$$\underset{\text{factor}}{\underset{\uparrow}{3}} \times 1 = 3$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} \quad \text{(top number: } 4 \leftarrow \text{factor)}$$

$$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \end{array} \leftarrow \text{product}$$

$$6 \times \underset{\text{factor}}{\underset{\uparrow}{2}} = 12$$

CET II

Circle each factor and draw a box around each product.

$4 \times 3 = 12$

$3 \times 8 = 24$

CIRCLE CORRECT BOX

TL. PTS.	
12	100%
NO. OF PTS.	%
11	92
10	83
9	75
8	67
7	58
6	50
5	42
4	33
3	25
2	17
1	8

Write the word product or factor for each numeral.

7 ← _____ 2 ← _____

×3 ← _____ ×8 ← _____

21 ← _____ 16 ← _____

Joey wants to buy six pieces of candy. Each piece costs 2¢.

How much money does he need? ____¢

Mary has 4 dolls. Jane has 3 times as many dolls as Mary has. How many dolls does Jane have? ____ dolls

CIRCLE CORRECT BOX

TL. PTS.	
2	100%
NO. OF PTS.	%
1	50

LEVEL D, MULTIPLICATION, SKILL 7

OBJECTIVE: Uses the terms "product" and "factor" to label correctly the parts of a multiplication problem.

STANDARD TEACHING SEQUENCE

Page		Supplementary Material
1.	Identifies product and factors by marking each as directed.	6
2.	Identifies product and factors by marking each as directed.	
3.	Writes "product" or "factor" to identify the parts of the given problems.	7
4.	Writes "product" or "factor" to identify the parts of the given problems.	
5.	CET I.	
	CET II.	8

Circle pages that are to be done

Standard Teaching Sequence, Con't.

1967 - 68

Teaching Aids:

Instructo Math Vocabulary Set, Flashcards

Textbook Resources:

Book	Teaching Pages	Practice Pages
Harcourt, Brace & World, 1966 Elementary Mathematics - 3	190	

These are the four skill sheets completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets.

Susan can: Identify the factor and product in multiplication equations when strong clues are provided.

Susan cannot: Identify factor and product in multiplication equations without clues.

Describe how Susan worked with the prescription: She requested teacher help when material became difficult (pp. 2-3).

Based on your analysis of Susan's work, you decide to:

_____ Revise original prescription
__X__ Extend prescription
_____ Assign a CET

Why? Susan does not understand the concept of factor and product.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 7 in particular), she was assigned the following on 3/15 :

Page	Reason
p. 90 Elementary Math - 3 06	This presents the factor-product concept in a visual way.
7	Labeling the factor, a product in multiplication equations

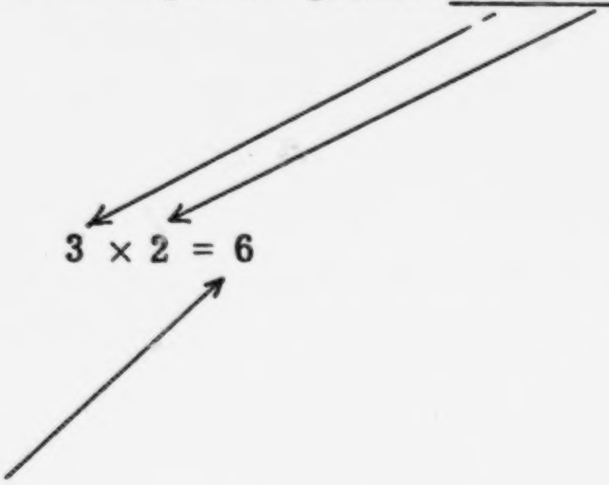
Estimate of time needed:

Recheck this skill sheet and the material in the curriculum text.

Record the pages and date on the Prescription Sheet.

TO THE STUDENT

What are the numbers called that are multiplied together? ______________



$3 \times 2 = 6$

What is the answer called? ______________

This booklet will teach you to use the words product and factor.

Answers

factors, product

The numbers that are multiplied together are called factors.

The answer to a multiplication question is called the product.

$$\underset{\text{Factor}}{\underset{\uparrow}{2}} \quad \times \quad \underset{\text{Factor}}{\underset{\uparrow}{3}} \quad = \quad \underset{\text{Product}}{\underset{\uparrow}{6}}$$

In this problem the factors are 2 and 3 and the product is 6.

Circle the factors.

⑤ × ② = 10 ③ × ① = 3

③ × ④ = 12 ④ × ⑤ = 20

Circle the product.

4 × 1 = ④ 3 × 3 = ⑨

3 × 5 = ⑮ 2 × 2 = ④

For extra practice do Page 6.

The numbers we multiply together are called factors.

$2 \times 8 = 16$

The answer is called the product.

Circle the factors.

$\begin{array}{r} 3 \\ \times 5 \\ \hline 15 \end{array}$ $0 \times 8 = 0$ $1 \times 1 = 1$

$4 \times 3 = 12$ $3 \times 2 = 6$

$\begin{array}{r} 6 \\ \times 2 \\ \hline 12 \end{array}$ $\begin{array}{r} 5 \\ \times 2 \\ \hline 10 \end{array}$ $3 \times 1 = 3$

Circle the products.

$2 \times 9 = 18$ $3 \times 6 = 18$ $5 \times 1 = 5$

$\begin{array}{r} 3 \\ \times 3 \\ \hline 9 \end{array}$ $4 \times 4 = 16$

Write the word product or factor in the blanks.

$$\begin{array}{rl} 4 & \\ \times 2 & \\ \cline{1-1} 8 & \leftarrow \text{product} \end{array}$$

$$6 \times \underset{\substack{\uparrow \\ \text{factor}}}{2} = 12$$

$$\begin{array}{rl} 3 & \\ \times 3 & \\ \cline{1-1} 9 & \leftarrow \text{product} \end{array} \qquad \begin{array}{rl} 3 & \\ \times 4 & \\ \cline{1-1} 12 & \leftarrow \text{product} \end{array} \qquad \begin{array}{rl} 2 & \\ \times 0 & \\ \cline{1-1} 0 & \leftarrow \text{product} \end{array}$$

$$\underset{\substack{\uparrow \\ \text{product} ✗}}{3} \times 6 = 18$$

$$6 \times 1 = \underset{\substack{\uparrow \\ \text{factor} ✗}}{6}$$

$$4 \times 5 = \underset{\substack{\uparrow \\ \text{factor} ✗}}{20}$$

$$\begin{array}{rl} 5 & \\ \times 3 & \leftarrow \text{product} ✗ \\ \cline{1-1} 15 & \end{array}$$

For extra practice, do Page 7.

This is the skill sheet completed by Susan and corrected by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the skill sheets.

Susan can: Identify and lable the factor and product in multiplication equations without clues.

Susan cannot: ____________________

Describe how Susan worked with the prescription: She got her own materials; she worked quickly and independently.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Revise original prescription
_____ Extend prescription
__X__ Assign a CET for Skill __7__

Why? Susan's performance on the materials indicates skill mastery.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 7 in particular), she was assigned the following on 3/16 :

Page	Reason
5	CET to determine skill mastery

Estimate of time needed: 20 minutes maximum.

Recheck this CET.

Record this page and date on the Prescription Sheet.

Write product or factor in each blank.

$$\underset{\underline{\text{factor}}}{\underset{\uparrow}{3}} \times \underset{\underline{\text{factor}}}{\underset{\uparrow}{2}} = \underset{\underline{\text{product}}}{\underset{\uparrow}{6}}$$

$$\begin{array}{r} 3 \\ \times 2 \\ \hline 6 \end{array} \leftarrow \underline{\text{product}}$$

$$4 \times \underset{\underline{\text{factor}}}{\underset{\uparrow}{3}} = 12$$

$$\underset{\underline{\text{factor}}}{\underset{\uparrow}{3}} \times 1 = 3$$

$$\begin{array}{r} 4 \\ \times 2 \\ \hline 8 \end{array} \begin{array}{l} \leftarrow \underline{\text{factor}} \\ \\ \\ \end{array}$$

$$\begin{array}{r} 2 \\ \times 2 \\ \hline 4 \end{array} \leftarrow \underline{\text{product}}$$

$$6 \times \underset{\underline{\text{factor}}}{\underset{\uparrow}{2}} = 12$$

This is the Skill 7 CET completed by Susan and recorded by the Aide.

Record (in the role of Aide) the scores on the Prescription Sheet.

Look at Susan's work on the CET.

Susan can: Part I - Identify and label factor and product in multiplication equations. Part II - Solve one-step word problems using multiplication factor of 3.

Susan cannot: ______________________________

Describe how Susan worked with the prescription: She worked quickly and confidently.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
__X__ Assign entire CET for Skill __8__.
_____ Assign Part II of CET for Skill ____.
_____ Write initial prescription for Skill ____.

Why? Pretest score (Skill 8) was 100%; Part II of this CET was above mastery; a full CET on Skill 8 will verify Pretest score and determine if Susan has retained her mastery over a long period of work.

Based on the diagnosis of Susan's behavior, her performance on the Pretest (Skill 8 in particular) and Susan's work on Part II of CET for Skill 7, she was assigned the following on 3/16 :

Page	Reason
9	CET to test mastery of Skill 8

Estimate of time needed: 20 minutes maximum.

Examine the objective for Skill 8 and recheck this CET in Skill 8 STS booklet.

Record the page and date on the Prescription Sheet.

CET I

Circle each factor and draw a box around each product.

4 × 7 = 28

2 × 9 = 18

CIRCLE CORRECT BOX	TL. PTS.	
	12	100%
	NO. OF PTS.	%
	11	92
	10	83
	9	75
	8	67
	7	58
	6	50
	5	42
	4	33
	3	25
	2	17
	1	8

Write the word product or factor for each numeral.

6 ← f

×3 ← f

18 ← p

4 ← f

×4 ← f

16 ← p

Mary bought 3 bags of marbles. Each bag had 10 marbles in it. How many marbles does Mary have? 30 marbles

John works in a grocery store 3 days a week. How many days does he work in 3 weeks? 9 days

CIRCLE CORRECT BOX	TL. PTS.	
	2	100%
	NO. OF PTS.	%
	1	50

This is the Skill 8 CET completed by Susan and corrected by the Aide.

Record (in the role of Aide) the score on the Prescription Sheet. Note that there is no Part II because this is the final skill in the D-Mult. Unit.

Look at Susan's work on the CET.

Susan can: Solve one-step multiplication problems with factors of 1-50.

Susan cannot: ____________________

Describe how Susan worked with the prescription: She completed her work independently.

Based on your analysis of Susan's work, you decide to: (check one)

_____ Extend prescription for the same skill.
_____ Assign a second CET for the same skill.
_____ Assign entire CET for skill ____.
_____ Assign Part II of CET for skill ____.
_____ Write initial prescription for skill ____.
__X__ Assign a posttest.
_____ Assign the next unit pretest.

Why? Susan's performance on the materials for this unit indicates mastery of the unit objectives.

Based on the diagnosis of Susan's behavior and her performance on the unit materials, she was assigned the following on 3/16 :

Review	To ensure Susan's comfort in a testing situation, she will review her work and take her test when she judges she is ready.
Posttest	To test mastery of unit

Estimate of time needed: 1-2 class periods.

Record the review and Posttest on the Prescription Sheet.

CET I

Solve each problem.

CIRCLE CORRECT BOX	TL. PTS.	
	5	100%
	NO. OF PTS.	%
	[✓ 4]	[✓ 80]
	3	60
	2	40
	1	20

Miss Smith has two spelling teams in her classroom. Each team has 10 children. How many children are in the class?

20 children

Donna has 3 kinds of coins. If she has 5 of each kind, how many coins does she have? 15 coins

In Miss Boston's classroom there are 5 rows of desks with 6 desks in each row. How many desks are there altogether?

30 desks

Last Saturday Dick saw a relay race. There were 4 teams with 4 men on each team. How many men were in the relay race? 16 men

Fred and Julie are building a pen for their pet rabbits. It will have 4 sides. They need 3 feet of wire screen for each side. How many feet of screen do they need to enclose the sides?

7 feet X

This is a copy of Susan's Posttest that has been completed and corrected by the Aide.

Turn to page 351-362 for directions for the Aide. P. 361 will tell you (in the role of the Aide) where to record information on the first page of your Prescription Sheets; p. 360 will tell you where to record information on the Unit Test Record.

SCHOOL CODE ☐

NAME Susan Markham

NUMBER 1234 **CLASS** 4

ipi

individually prescribed instruction

MATHEMATICS

Post-Test

LEVEL D

MULTIPLICATION (05)

Developed by The Testing and Evaluation Staff, Learning Research and Development Center, University of Pittsburgh; Richard Cox, Ph.D., Director

Appleton-Century-Crofts ACC Division of Meredith Publishing Company

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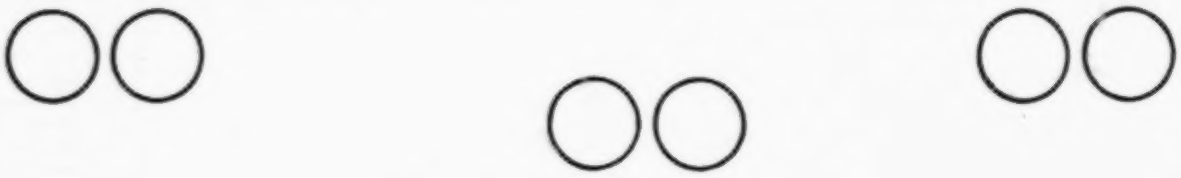
DEVELOPMENTAL EDITION

D MULTIPLICATION (05) POST-TEST SKILL 1

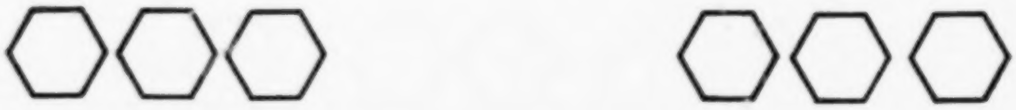
CIRCLE CORRECT BOX

TL. PTS.	
[✓ 5]	[✓ 100%]
NO. OF PTS.	%
4	80
3	60
2	40
1	20

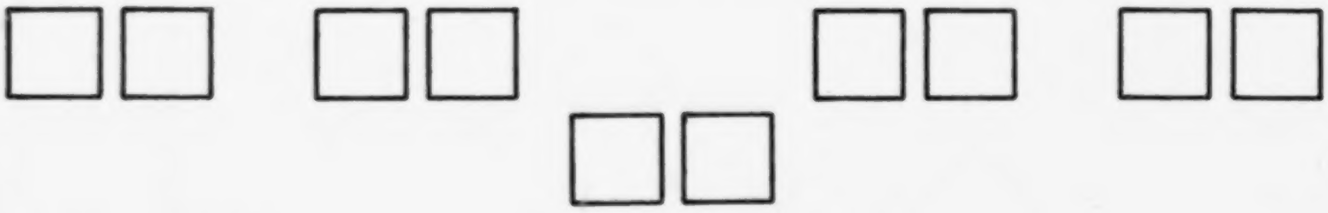
Directions: Complete each equation.



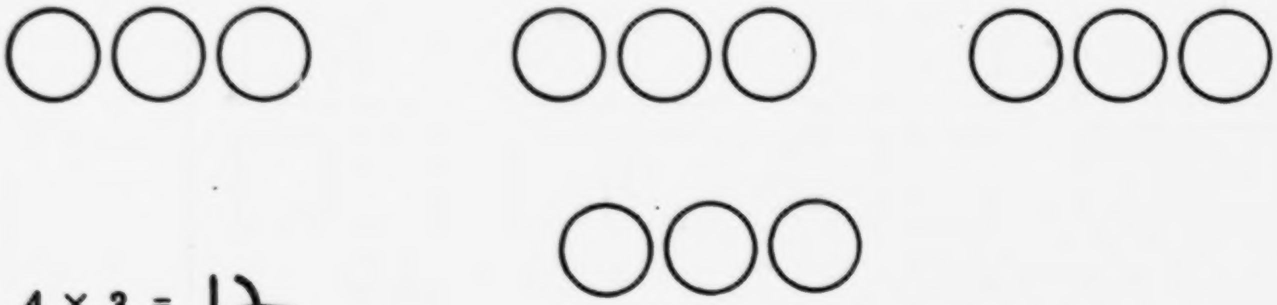
3 × 2 = 6



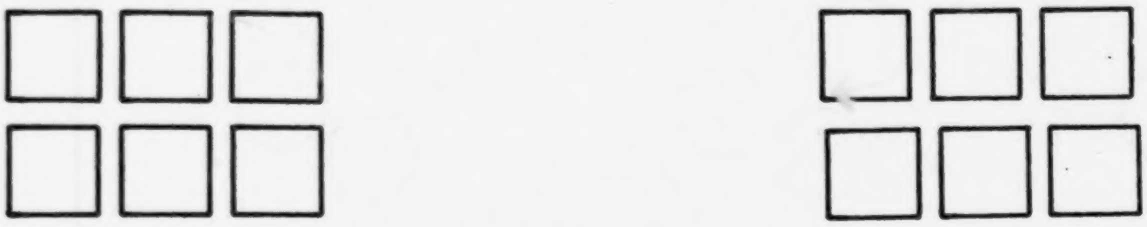
2 × 3 = 6



5 × 2 = 10



4 × 3 = 12

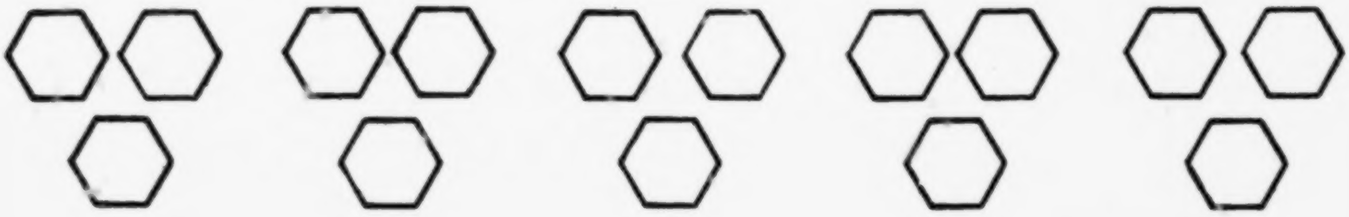


2 × 6 = 12

Directions: Complete each equation.

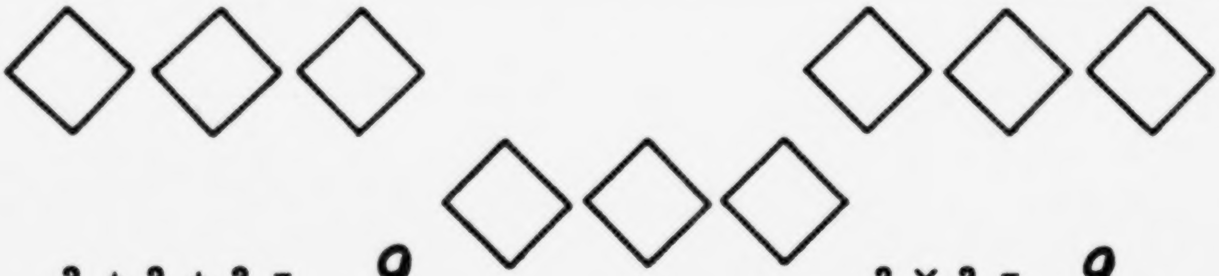
5 + 5 = 10

2 × 5 = 10



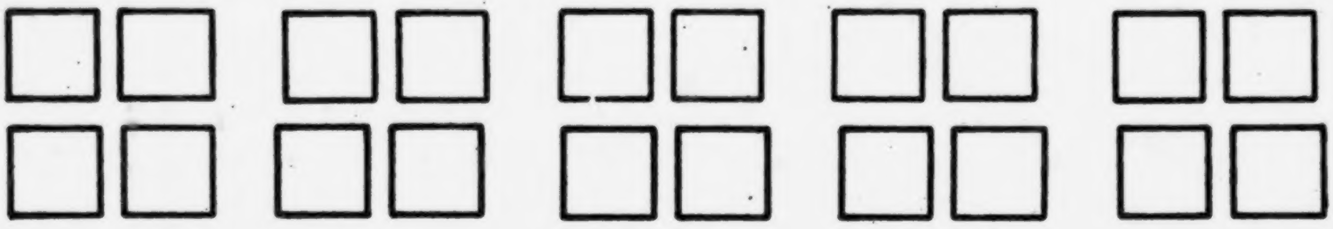
3 + 3 + 3 + 3 + 3 = 15

5 × 3 = 15



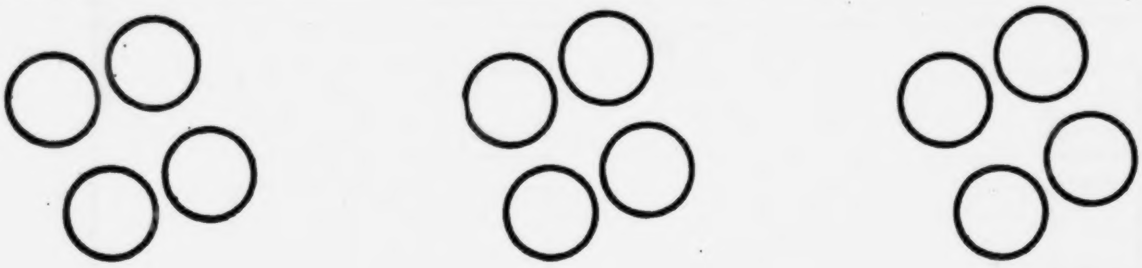
3 + 3 + 3 = 9

3 × 3 = 9



4 + 4 + 4 + 4 + 4 = 20

5 × 4 = 20



4 + 4 + 4 = 12

3 × 4 = 12

CIRCLE CORRECT BOX

TL. PTS.	
[✓ 5]	[✓ 100%]
NO. OF PTS.	%
4	80
3	60
2	40
1	20

CIRCLE CORRECT BOX

TL. PTS.	
[✓ 8]	[✓ 100%]
NO. OF PTS.	[illegible]
7	[illegible]
6	[illegible]
5	63
4	50
3	38
2	25
1	13

Directions: Multiply.

$\begin{array}{r} 7 \\ \times 1 \\ \hline 7 \end{array}$ $\quad$ $\begin{array}{r} 8 \\ \times 0 \\ \hline 0 \end{array}$ $\quad$ $\begin{array}{r} 1 \\ \times 9 \\ \hline 9 \end{array}$ $\quad$ $\begin{array}{r} 0 \\ \times 3 \\ \hline 0 \end{array}$

6 × 1 = 6

0 × 4 = 0

1 × 1 = 1

2 × 0 = 0

CIRCLE CORRECT BOX

TL. PTS.	
20	100%
NO. OF PTS.	%
19	95
[✓ 18]	[✓ 90]
17	85
16	80
15	75
14	70
13	65
12	60
11	55
10	50
9	45
8	40
7	35
6	30
5	25
4	20
3	15
2	10
1	5

Directions: Multiply.

$\begin{array}{r} 5 \\ \times\ 3 \\ \hline 15 \end{array}$ $\begin{array}{r} 6 \\ \times\ 4 \\ \hline 24 \end{array}$ $\begin{array}{r} 3 \\ \times\ 2 \\ \hline 6 \end{array}$ $\begin{array}{r} 8 \\ \times\ 3 \\ \hline 24 \end{array}$ $\begin{array}{r} 7 \\ \times\ 5 \\ \hline 35 \end{array}$

$\begin{array}{r} 9 \\ \times\ 2 \\ \hline 18 \end{array}$ $\begin{array}{r} 10 \\ \times\ 3 \\ \hline 30 \end{array}$ $\begin{array}{r} 9 \\ \times\ 5 \\ \hline 42 \end{array}$ X $\begin{array}{r} 4 \\ \times\ 5 \\ \hline 20 \end{array}$ $\begin{array}{r} 9 \\ \times\ 4 \\ \hline 36 \end{array}$

$\begin{array}{r} 6 \\ \times\ 2 \\ \hline 12 \end{array}$ $\begin{array}{r} 4 \\ \times\ 4 \\ \hline 16 \end{array}$ $\begin{array}{r} 0 \\ \times\ 5 \\ \hline 0 \end{array}$ $\begin{array}{r} 7 \\ \times\ 4 \\ \hline 24 \end{array}$ X $\begin{array}{r} 5 \\ \times\ 2 \\ \hline 10 \end{array}$

3 × 1 = 3

5 × 10 = 50

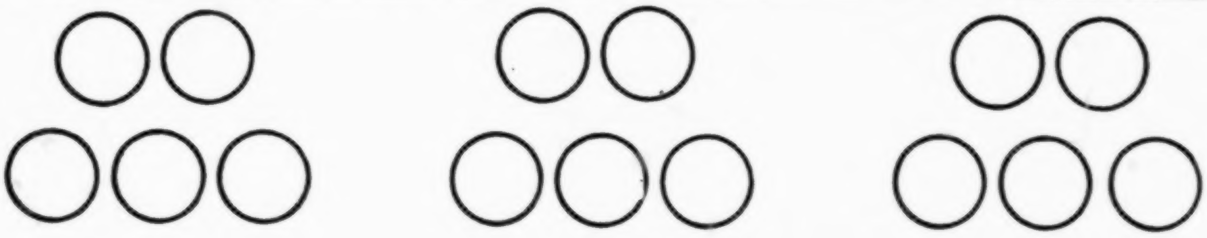
2 × 8 = 16

3 × 7 = 21

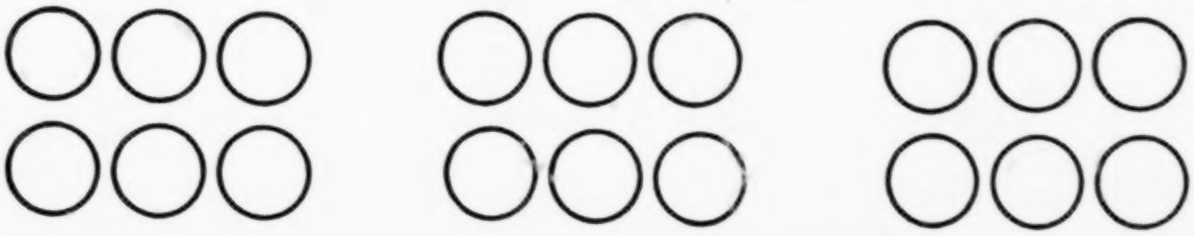
4 × 2 = 8

CIRCLE CORRECT BOX	TL. PTS.	
	[✓ 5]	[✓ 100%]
	NO. OF PTS.	%
	4	80
	3	60
	2	40
	1	20

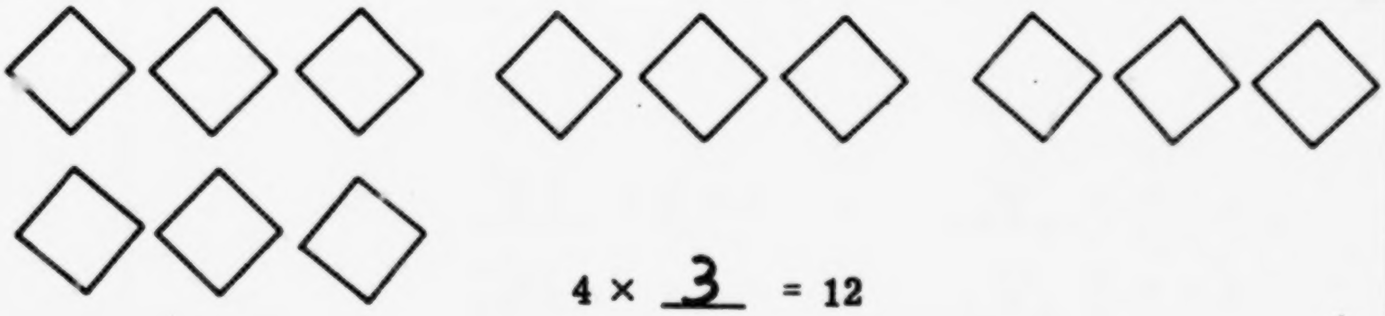
Directions: Fill in the blank to complete each equation.



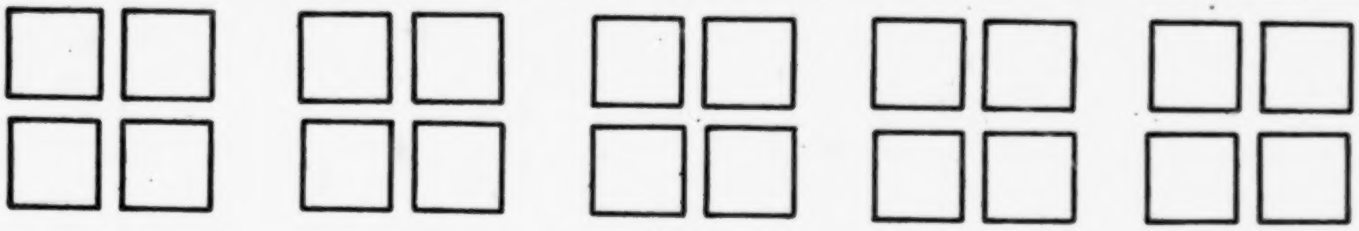
3 × 5 = 15



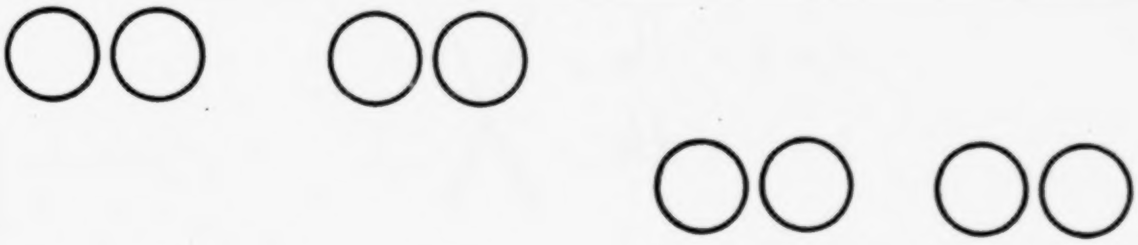
3 × 6 = 18



4 × 3 = 12



5 × 4 = 20



4 × 2 = 8

D MULTIPLICATION (05) POST-TEST

SKILL 6

CIRCLE CORRECT BOX

TL. PTS.	
5	100%
NO. OF PTS.	%
[✓ 4]	[✓ 80]
3	60
2	40
1	20

Directions: Multiply.

4 × 3 = 12

3 × 4 = 12

3 × 6 = 18

6 × 3 = 18

1 × 7 = 7

7 × 1 = 7

3 × 5 = 15

5 × 3 = 15

9 × 2 = 16

2 × 9 = 16

CIRCLE CORRECT BOX

TL. PTS.	
5	100%
NO. OF PTS.	%
[✓ 4]	[✓ 80]
3	60
2	40
1	20

Directions: Circle the answer.

How many factors are there in the problem 6 × 1 = 6?

one two [✓ three] four X

In the problem 3 × 4 = 12, which number or numbers are products?

only 3 both 3 and 4 3, 4, and 12 [✓ only 12]

In the problem 3 × 4 = 12, which number or numbers are factors?

only 3 [✓ both 3 and 4] 3, 4, and 12 only 12

In the problem 4 × 5 = 20, what is the 20 called?

factor sum quotient [✓ product]

In the problem 2 × 5 = 10, what is the 5 called?

[✓ factor] sum quotient product

D MULTIPLICATION (05) POST-TEST SKILL 8

CIRCLE CORRECT BOX

TL. PTS.	
[✓ 5]	[✓ 100%]
NO. OF PTS.	%
4	80
3	60
2	40
1	20

Directions: Solve each problem. Write your answer on the line and label it.

Jane had 4 boxes with 5 pencils in each box. How many pencils did Jane have in all?

20 pencils

In basketball, Smith scored 7 points in each of 3 games. How many points did Smith score in all?

21 points

Dorothy had 2 fishbowls. Each fishbowl contained 9 fish. How many fish did Dorothy have in all?

18 fish

Roberto filled 6 bags with apples. Each bag held 5 apples. How many apples were in the 6 bags?

30 apples

How many marbles would you have if you had 3 boxes with 9 marbles in each box?

27 marbles

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF

SCHOOL STAMP U. S. 2-3

STUDENT NAME Susan MarKham

STUDENT NUMBER 1 2 3 4
U. S. 4 5 6

GRADE 4 U. S. 9

ROOM 102

UNIT D-Mult. U. S. 10 11 12

UNIT DATES		
UNIT BEGAN	3/3	U. 13-16
UNIT ENDED	3/16	U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20 21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	3/3	MB	1	Read Student Page								JW		
2				2		6	6					JW		
3				3		8	8					JW	1	
4				4		6	6					JW		
5				5		5	5					SD		
6				8		6	6					SD	2	
7				11		6	6					SD		
8	3/5	MB	1	13		18	18					SD	3	
9	3/6							4/4	100	4/4	100	JW	4	
10	3/6							8/8	100	5/6	83	JW	1	
11								12/12	100	0/7	0	SD	1	
12	3/7											SD		25
13												SD		
14												SD	1	
15												JW		
16												JW		
17.												JW	2	
18	3/11											SD		27

AIDE

Scores and records Posttest information on the Prescription Sheet:

a. Maximum points per skill

b. Students points per skill

c. Percentages per skill

d. Average score and percentage

e. Date corrected (3/16)

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

OVERFLOW U. & S. 79

UNIT CARD: "U" IN COLUMN 80

KEYPUNCH SAMPLE

SKILL 29-31	PRE % U. 32-33	POST. % U. 34-35
01	80	95

TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X 1	5	3	60	5	100				
X									
X 2	5	0	0	5	100				
X									
X 3	8	8	100	8	100				
X									
X 4	20	3	15	18	90				
X									
X 5	5	0	0	5	100				
X									
X 6	5	2	40	4	80				
X									
X 7	5	0	0	5	100				
X									
X 8	5	5	100	5	100				
X									
X	58	21	36%						

Based upon totype originated by the Learning Research and Developmen nter.
As field tested by Research for Better Schools, Inc.

ipi individually prescribed instruction
MATHEMATICS

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DIVISION OF MEREDITH PUBLISHING COMPANY
440 Park Avenue South, New York, N. Y. 10016

MATHEMATICS UNIT TEST RECORD

NAME Susan Markham
NUMBER 1234
CLASS 4

NUMERATION (Ø1)			Level B						Level C						Level D						Level						Level					
			1–Pre–2		Post				1–Pre–2		Post				1–Pre–2		Post				1–Pre–2		Post				1–Pre–2		Post			
					1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
PLACED AT LEVEL	B	Max.Pts.	24/29		29/29				47/60		55/60				25/35		30/35															
		Score	83		100				78		91				71		86															
		Date	9/25		10/13				11/1		11/17				1/19		1/27															
PLACE VALUE (Ø2)			Level B						Level C						Level D						Level						Level					
					1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
PLACED AT LEVEL	B	Max.Pts.	24/33		30/33				22/31		27/31				17/24		21/24															
		Score	73		91				71		87				71		88															
		Date	10/14		10/20				11/18		12/1				1/28		2/7															
ADDITION (Ø3)			Level						Level C						Level D																	
					1	2	3	4			1	2	3	4			1	2	3										1	2	3	4
PLACED AT LEVEL	C	Max.Pts.							40/57		57/57				23/32		30/32															
		Score							70		100				72		94															
		Date							12/2		12/20				2/8		2/15															
SUBTRACTION (Ø4)			Level						Level C						Level D																	
					1	2	3	4			1	2	3	4			1	2	3										1	2	3	4
PLACED AT LEVEL	C	Max.Pts.							50/60		58/60				15/25		21/25															
		Score							83		97				60		84															
		Date							1/3		1/18				2/16		3/2															
MULTIPLICATION (Ø5)			Level						Level						Level D						Level						Level					
					1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
PLACED AT LEVEL	D	Max.Pts.													21/58		54/58															
		Score													36		93															
		Date													3/3		3/16															
DIVISION (Ø6)			Level						Level						Level						Level						Level					
					1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
PLACED AT LEVEL	C	Max.Pts.																														
		Score																														
		Date																														
COMBINATION OF PROCESSES (Ø7)			Level						Level						Level						Level						Level					
					1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4			1	2	3	4
PLACED AT LEVEL	D	Max.Pts.																														
		Score																														
		Date																														

AIDE

Enters Posttest information on Unit Test Record:

a. Maximum Points
b. Score
c. Date

UPDATE AND PLACE IN STUDENT FOLDER.

APPLETON-CENTURY-CROFTS REC 1-A

356 36

Examine the Posttest starting on page 346.

On your Prescription Sheet #1, check the skills in the unit that are below 85%.

Examine these skills carefully and analyze Susan's work on Posttest in these skills.

Make a general statement about Susan's performance on the entire Posttest: Susan demonstrates mastery of all skill objectives but makes random errors in multiplication facts.

Describe how Susan worked with the prescription: She worked with extreme independence.

Based on your analysis of Susan's work, you decide to: (check one)

- _____ Extend prescription for the same skill.
- _____ Assign a second CET for the same skill.
- _____ Assign entire CET for skill ____.
- _____ Assign Part II of CET for skill ____.
- _____ Write initial prescription for skill ____.
- _____ Assign a Posttest.
- __X__ Assign the next unit Pretest.

Why? Susan demonstrated mastery of this unit and will now work in the next unit as indicated on her Placement Profile.

Note: Write "Mastery" and your initials on the front Prescription Sheet.

1. Review the information on your Prescription Sheet to get a total picture of Susan's performance on this unit.

2. Check your Prescription Sheet against the model sheets starting on Page 363.

3. If the information on your sheets is recorded incorrectly, refer to the point in these materials where you made your error by using the page references on the model.

4. Record (in the role of Aide):
    a. Days Worked
    b. Number the Prescription Sheet pages

MATHEMATICS PRESCRIPTION SHEET

PAGE: 1 OF 3 ▨

Mastery MB

SCHOOL STAMP	U. S. 2-3
STUDENT NAME	Susan Markham
STUDENT NUMBER	1 2 3 4
U. S.	4 5 6 7
GRADE	4
U. S.	9
ROOM	102
UNIT	D-MULT 1, 2, 4, 5, 7
U. S.	10 11 12

UNIT DATES		
UNIT BEGAN	3/3	U. 13-16
UNIT ENDED	3/16	U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR
BEGAN
ENDED
Workec

Development of Prescription

Page References

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	3/3	MB	Pretest											
2	3/3	MB	1	Read Student Page										192
3				2		6	6							
4				3		8	8						1	
5				4		6	6							
6				5		5	5							
7				8		6	6						2	
8				11		6	6							226
9	3/5	MB	1	13		18	18						3	
10	3/6	MB	1	16	CET			4/4	100	4/4	100	JN	4 ✓	233
11	3/6	MB	2	16P	CET			8/8	100	5/6	83	JN	1 ✓	236
12			3	17P	CET			12/12	100	0/7	0	SD	1 ✓	238
13	3/7	MB	4	Read Student Page										244
14				1		18	18							
15				2		13	13						1	
.16				3		3	10							
17.				12R	09	31	31							
18				13R	09	10	10						2	

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

CH SAMPLE	
RE % U. 32-33	POST. % U. 34-35
80	95

TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X ①	5	3	60	5	100				
X									
X ②	5	0	0	5	100				
X									
X 3	8	8	100	8	100				
X									
X ④	20	3	15	18	90				
X									
X ⑤	5	0	0	5	100				
X									
X 6	5	2	40	4	80				
X									
X ⑦	5	0	0	5	100			367	

MATHEMATICS PRESCRIPTION SHEET

PAGE: 2 OF 3

SCHOOL STAMP	U. S. 2-3

STUDENT NAME Susan Markham

STUDENT NUMBER	1	2	3	4
U. S.	4	5	6	7

GRADE	4
U. S.	9

ROOM 102

UNIT D-MULT			
U. S.	10	11	12

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1	3/11	YMB	4	14R	09	28	30							271
2				15R	09	10	10							
3				17R	09	10	10							
4				5		16	16						3	
5	3/12	YMB	4	6		14	16							278
6				7		19	20							
7				8	CET			21/21	100	2/2	100		4	283
	3/12	YMB	5	7P	CET			4/4	100	4/6	67		1	286
9	3/13	YMB	6	Read Student Page										290
10				2		17	17							
11				4		15	15						1	
12				6		21	23							
13				8		16	18							
14	3/13	YMB	6	12	02	24	24						2	313
15	3/14	YMB	6	13	CET			18/18	100	0/6	0		3	319
.16	3/14	YMB	7	Read Student Page										323
17.				1		15	15							
18				2		10	21							

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

SAMPLE

% U. 2-33 0

POST. % U. 34-35 95

TO 78

PRE AND POST TEST SCORES										
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									

MATHEMATICS PRESCRIPTION SHEET

PAGE: 3 OF 3

SCHOOL STAMP | U. S. 2-3

STUDENT NAME Susan Markham

STUDENT NUMBER 1 2 3 (U. S. 4 5 6 7)

GRADE 4 (U. S. 9)

ROOM 102

UNIT D-MULT (U. S. 10 11 12)

UNIT DATES		
UNIT BEGAN		U. 13-16
UNIT ENDED		U. 17-20
DAYS WORKED*		U. 21-22

SCHOOL CALENDAR		
BEGAN		U. 23-25
ENDED		U. 26-28
Worked		

	SKILL BOOKLETS							CURRICULUM TEST						
								PART 1		PART 2				
	DATE PRES. S. 13-16	PRES. INIT. S. 17-19	SKILL NO. S. 20-21	PAGE NO. S. 22-57	INST. TECH CODES S. 58-71	SCORE	MAX. POINTS	SCORE	% S. 72-73	SCORE	% S. 74-75	SC'S INIT.	DAYS* WORKED IN SKILL S. 76-77	NOTES
1				3		5	9						1	
2	3/15	MB	7	ESM-p.	90-06	10	10						2	336
3				7		4	4							
4	3/16	MB	7	5	CET			13/13	100	2/2	100		3	341
5	3/16	MB	Review											
6														
7			Post test											
8														
9														
10														
11														
12														
13														
14														
15														
16														
17.														
18														

CODES	INSTRUCTIONAL TECHNIQUE
01	TEACHER TUTOR
02	PEER TUTOR
03	SMALL GROUP (2-10)
04	LARGE GROUP (11-UP)
05	SEMINAR
06	CURR. TEXTS
07	OTHER TEXTS
08	FILM STRIPS
09	RECORDS, TAPES
10	RESEARCH
11	TUTOR OF OTHERS
12	OTHERS

ICH SAMPLE

RE % 32-33 80

POST. % U. 34-35 95

TO 78

PRE AND POST TEST SCORES									
ENTER SKILL NUMBER	ENTER POINTS PER SKILL	PRE	%	POST	%	POST	%	POST	%
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									
X									